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INFRARED BREATH TEST OPERATOR MANUAL

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TABLE OF CONTENTS

SECTION 1.0 TRAINING AND CERTIFICATION PROGRAM

SECTION 1.1	TRAINING ELIGIBILITY.....	1
SECTION 1.2	TRAINING REQUIREMENTS.....	1
SECTION 1.3	CERTIFIED OPERATORS - LOCAL POLICE.....	2
SECTION 1.4	CERTIFIED OPERATORS - STATE POLICE.....	2
SECTION 1.5	VALID BREATH TESTS	2
SECTION 1.6	CERTIFIED INSTRUMENTS.....	3
SECTION 1.7	ANNUAL CERTIFICATION OF INSTRUMENTS.....	4
SECTION 1.8	PERIODIC TESTING OF INSTRUMENTS.....	4

SECTION 2.0 ALCOHOL

SECTION 2.1	DEFINITIONS OF ALCOHOL.....	4
SECTION 2.2	TYPES OF ALCOHOL	4
SECTION 2.3	PROPERTIES OF ETHANOL.....	6
SECTION 2.4	PROOF SYSTEM.....	6
SECTION 2.5	DEFINITION OF ONE DRINK.....	6

SECTION 3.0 DISTRIBUTION AND METABOLISM OF ALCOHOL

SECTION 3.1	ABSORPTION AND DISTRIBUTION OF ALCOHOL.....	8
SECTION 3.2	METABOLISM OF ALCOHOL.....	8

SECTION 4.0 BREATH ALCOHOL V. BLOOD ALCOHOL

SECTION 4.1	RESPIRATORY SYSTEM.....	9
SECTION 4.2	DEEP LUNG AIR.....	10
SECTION 4.3	RELATIONSHIP OF BLOOD V. BREATH ALCOHOL.....	10
SECTION 4.4	2100 : 1 RATIO.....	11
SECTION 4.5	BAC LEVEL	12
SECTION 4.6	METABOLISM RATE.....	13

SECTION 5.0 INFRARED BREATH TESTING INSTRUMENTS AND SIMULATORS

SECTION 5.1	DEFINITION OF INFRARED.....	13
SECTION 5.2	LAMBERT- BEER'S LAW OF ABSORPTION.....	13
SECTION 5.3	BACKGROUND ON INFRARED INSTRUMENTS.....	14
SECTION 5.4	INFRARED ANALYSIS OF BAC LEVELS.....	14
SECTION 5.5	DEFINITION OF A SIMULATOR.....	16
SECTION 5.6	COMPONENTS OF A SIMULATOR.....	16
SECTION 5.7	VALID SIMULATOR READINGS.....	16
SECTION 5.8	TYPES OF SIMULATOR.....	17

SECTION 6.0 BREATH TESTING PROCEDURES

SECTION 6.1	OPERATIONAL PROCEDURE CHECKLIST.....	18
SECTION 6.2	BREATH TEST LOG.....	19
SECTION 6.3	UNIFORM FORM.....	19

SECTION 7.0 RESPONSIBILITIES OF A BREATH TEST OPERATOR

SECTION 7.1	PREPARING THE INSTRUMENT AND SIMULATOR	20
SECTION 7.2	ADMINISTERING A BREATH TEST.....	20
SECTION 7.3	VARIATIONS WHEN ADMINISTERING A BREATH TEST.	21

SECTION 8.0 PRESENT OUI STATUTE

SECTION 8.1	THE 0.08% BILL.....	22
SECTION 8.2	STATUTORY RIGHTS AND CONSENT FORM.....	23
SECTION 8.3	BREATH TEST REFUSALS.....	23
SECTION 8.4	BREATH TESTS.....	25
SECTION 8.5	BLOOD TEST.....	30
SECTION 8.6	OPERATING UNDER THE INFLUENCE OF DRUGS.....	31
SECTION 8.7	COMMERCIAL DRIVERS AND 0.04%.....	31
SECTION 8.8	SERUM ALCOHOL.....	34

INFRARED BREATH TEST OPERATOR'S CERTIFICATION MANUAL

SECTION 1.0 TRAINING AND CERTIFICATION PROGRAM

SECTION 1.1 TRAINING ELIGIBILITY

Only officers with Chapter 90 powers are eligible to become breath test operators, certified to conduct breath tests on defendants under arrest for Chapter 90 offenses. An arrest precedes a breath test under all Chapter 90 offenses, except Chapter 90F.

All training of breath test operators is conducted by the Massachusetts Criminal Justice Training Council (the Council). 501 CMR 2.21. All instructors of breath test operators are also trained by the Council. 501 CMR 2.26. A breath test operator is initially certified for a period of three years. 501 CMR 2.22(2). Before the expiration of the three year period, the breath test operator must be recertified. 501 CMR 2.25(2). If the operator is not recertified before the expiration of the three year period, the operator can no longer give evidentiary breath tests. The officer is no longer eligible for recertification and must be certified as a breath test operator in accordance with 501 CMR 2.22(2). A limited number of 60 day extensions are available only with prior written approval of the Council. 501 CMR 2.25(2).

SECTION 1.2 TRAINING REQUIREMENTS

The Breath Test Operators certification class is an eight hour course. In order to successfully complete the course and to become certified for a three year period the officer must:

1. Attend a class being taught by a certified Breath Test Operator Instructor.
2. Complete a valid evidentiary breath test on a subject, which can be the operator. The operator must fill out the proper operational procedure checklist. The breath test must be run as part of the class. (See A-3).
3. Complete the appropriate forms as if an arrested Massachusetts driver, twenty eight years old, with a valid Massachusetts Class D license in his/her possession took a breath test and had the test results of 0.17 % / 0.15% / 0.17%. (Forms A-G).
4. Successfully complete a written examination.

SECTION 1.3 CERTIFIED OPERATORS- LOCAL POLICE

Upon completion of the course, your instructor will submit your test results, your operational procedure checklist, and your completed forms to Ann Saulnier of the Training Council at NERPI, P.O. Box 479, Tewksbury, MA 01876.

After reviewing the submitted materials, Ms. Saulnier will issue a letter to your Chief indicating you have successfully completed the certification course. The letter will indicate the three year period your certification is valid for. (See A-1). THE LETTER IS THE ONLY PROOF OF YOUR CERTIFICATION AS A BREATH TEST OPERATOR.

THE OFFICE OF ALCOHOL TESTING DOES NOT RECERTIFY PEOPLE AND AS NO RECORDS OF THE OPERATOR'S CERTIFICATE.

SECTION 1.4 CERTIFIED OPERATORS- STATE POLICE

State Police officers are notified by a certificate, provided by the State Police to the Training Council, that a state police officer has been certified/ qualified (See A-2). The certificate indicates the dates during which the operator can give breath tests. All State Police officers are trained by certified State Police instructors.

Only State Police officers receive certificates. No local officers receive certificates.

SECTION 1.5 VALID BREATH TEST

M.G.L. c. 90, s. 24K states "that a chemical analysis of the breath of a person charged with a violation of this chapter shall not be considered valid under the provisions of this chapter, unless such analysis has been performed by a certified operator using infrared breath testing devices according to methods approved by the Secretary of Public Safety."

All evidentiary breath testing in the Commonwealth is governed by 501 CMR 2.00. These regulations were originally promulgated in 1987 in response to the passage of "The Safe Roads Act", which is Act 620 of the 1986 Legislature. The regulations were amended March 29, 1991, February 13, 1992, May 27, 1994 and June 27, 1994.

For a breath test to be valid in the Commonwealth, the breath test must meet the following provisions:

1. Be performed by a certified operator;
2. Be on a certified instrument using a certified simulator;

3. Be done by following the operational procedure checklist;
4. Be entered into the Breath Test Log; and
5. Be reported on the uniform form.

SECTION 1.6 CERTIFIED INSTRUMENT

The Office of Alcohol Testing is required to maintain a list of approved breath testing instruments and simulators which can be purchased to perform evidentiary breath tests in the Commonwealth. 501 CMR 2.38. (See A-3, 4). In order for an instrument or simulator to be placed on the OAT approval list, the instrument must first be on the National Highway Traffic Safety list of conforming products. (See 49 CFR 48854). The conforming product list includes many types of instruments to test for breath alcohol. Among the type of instruments on the list are preliminary breath testing instruments using fuel cells; instruments using dry gas standards; instruments using gas chromatography; and instruments using chemical methods.

Only infrared breath testing instruments can be used in Massachusetts. For this reason, the list of OAT approved instruments is much shorter than the federal list.

The Director of the Office of Alcohol Testing evaluates and tests the infrared instruments to ensure they meet the specifications defined in the Massachusetts regulations, (501 C.M.R. 2.00 et seq.) before placing them on the OAT approval list. Non infrared instruments can not be used to perform evidentiary tests in the Commonwealth. M.G.L. c. 90, s. 24K.

Once an instrument is placed on the OAT list of approved breath testing devices, departments in the Commonwealth purchase an instrument from this list. The instrument is initially delivered to the Office of Alcohol Testing. OAT tests the instrument to certify the instrument for use in performing evidentiary test. 501 CMR 2.39. After the initial certification testing, recertification testing of instruments and simulators takes place on an annual basis.

An instrument is certified for use if:

1. It is on the OAT list of approved instruments;
2. It has been operated in accordance with manufacturers specifications since it was purchased or since it was most recently certified;
3. It is working when it is brought to the Office of Alcohol Testing; and

4. It successfully completes the certification testing at OAT.

SECTION 1.7 ANNUAL CERTIFICATION OF INSTRUMENTS

If an instrument or simulator passes annual certification at OAT, a certificate is issued to the Officer in Charge of the equipment at each police department. The certificate indicates the instrument and/or simulator certified, the serial number of the equipment, and the dates the certificate is valid for. 501 CMR 2.240. (See A-5, 6). Instruments cannot be used to give evidentiary tests after the instrument's annual certification has expired.

SECTION 1.8 PERIODIC TESTING OF INSTRUMENTS

In order for this certificate to remain valid, the department must comply with the periodic testing program administered by OAT. 501 CMR 2.40 (1). Since January 1, 1993, evidence of compliance with the periodic testing program is by a certificate issued by OAT to the department which is valid for six months. (A-7, 8). Prior to January 1, 1993, evidence of compliance with the periodic testing program can be found in each department's Maintenance and Use Log. 501 CMR 2.41 (7).

SECTION 2.0 ALCOHOL

SECTION 2.1 DEFINITION OF ALCOHOL

Alcohol refers to a group of compounds which all contain carbon, hydrogen and oxygen. All alcohols are organic compounds. Because alcohols are organic compounds, they can be detected with infrared technology. All certified breath testing instruments used by law enforcement in the Commonwealth are infrared breath testing instruments.

ALCOHOL = ORGANIC = CARBON, HYDROGEN, OXYGEN

SECTION 2.2 TYPES OF ALCOHOL

There are many different types of alcohol. Ethanol is the most commonly known alcohol. Ethanol is the type of alcohol an individual will normally ingest. Ethanol, ethyl alcohol, grain alcohol and EtOH are used interchangeably. All describe one type of alcohol, the type an individual normally ingests.

Methanol is another type of alcohol that is sometimes ingested. Methanol, methyl alcohol, wood alcohol, and MeOH are interchangeably names for the same type of alcohol.

Methyl and ethyl alcohol are chemically different. The effect

of each on the human body is remarkable different. Methanol is highly toxic causing blindness and death at very low levels.

ETHANOL= TYPE OF ALCOHOL A PERSON NORMALLY DRINKS

Many other types of alcohol are commonly found in our homes. Isopropyl alcohol is commonly known as rubbing alcohol. Ethylene glycol is commonly known as antifreeze. Butyl alcohol is present in after shave lotion. Mouth washes, cough syrups, breath fresheners and medications can contain ethyl alcohol.

Ethyl alcohol is also widely used as a solvent. To prevent consumption of industrial ethyl alcohol, a denaturant is added to the alcohol. Denatured alcohol is alcohol plus a poison(denaturant). If an individual drinks denatured alcohol, the person would become sick from the denaturant. Ingestion of the denatured alcohol can be fatal. The U.S. government has a list of approved denaturants that may be added to ethanol. Methanol, isopropanol, toluene, and benzene are all legal denaturants.

SECTION 2.3 PROPERTIES OF ETHANOL

Ethanol is a clear, colorless liquid. In the remainder of the manual, the term alcohol will be substituted for ethanol. In the concentrated state, 200 proof or 100%, alcohol has a slight, distinct odor. Alcohol has no odor at the concentrations in which it can be legally purchased for ingestion. Alcohol is available in concentrations of approximately 3% to 43%. It is the flavorings and colorings in the alcohol which are called congeners, that give the alcoholic beverage a particular odor.

A glass of wine does not smell like a can of beer or a shot of scotch. The wine, beer and scotch contain the same alcohol, ethanol. The alcoholic beverage has a unique odor, not the alcohol that is found within the beverage.

Another property of ethanol is that it will freely mix with water. When you pour vodka into orange juice, the vodka does not float on top of the juice, nor does it sink to the bottom of the juice. The alcohol mixes with the water in the beverage.

It cannot be stated that an open container of a beverage contains alcohol unless it is specifically analyzed for the ethanol. It can be stated that an open container has an odor of a particular alcoholic beverage known to you because of your training and experience.

ALCOHOL = CLEAR, COLORLESS LIQUID, MIXES WITH WATER, NO ODOR

SECTION 2.4 PROOF SYSTEM

The proof system is used in the United States to indicate the amount of ethanol present in distilled beverages. The amount of alcohol present in beer is now at issue before the United States Supreme Court. The amount of alcohol present in wine is found as a percentage on the label.

Proof equals twice the percentage of ethanol found in the distilled spirits. For example, if a bottle of gin is labeled 80 proof, it contains 40% ethyl alcohol. The other 60% is water, flavorings and coloring.

PROOF = 2 X ETHANOL %

SECTION 2.5 DEFINITION OF ONE DRINK

One drink can be defined as one 12 ounce beer containing 5% ethanol; one six ounce glass of wine containing 10% ethanol; or one

shot of 86 proof distilled spirits. (Note: One shot = 1.5 ounces). If a 150 pound man ingested "one drink", he would have a blood alcohol level of approximately 0.02%. This is a general rule. Blood alcohol levels are dependent upon the water content of a person's body. An individual's BAC level can vary from as low as a 0.01% to as high as a 0.05% from ingesting "one drink".

ONE DRINK= ONE BEER = ONE SHOT = ONE GLASS OF WINE
ONE DRINK = 0.02% , 150 LB. MAN

If two woman, one weighing 100 pounds, the other weighing 200 pounds and both of similar body composition, were to ingest the same amount of alcohol; the one hundred pound woman would have a BAC level twice as high as the two hundred pound woman. The same relationship would hold true for a comparison between two males of like body composition.

If you were to compare a male and a female, the relationship does not work. Men normally have a higher water content, pound for pound, than females. The male would have a lower BAC than a female if they both weighed the same and both ingested the same amount of alcohol. This generalization holds only for male and females of average body consistency. Some woman are more muscular and would have a higher water content than the average female, lowering their BAC level below the norm for women. Some men have more fat tissue than the average male, and would have a lower water content, raising their BAC level above the norm for men.

SECTION 3.0 DISTRIBUTION AND METABOLISM OF ALCOHOL

SECTION 3.1 ABSORPTION AND DISTRIBUTION OF ALCOHOL

Alcohol can be inhaled, injected or ingested. The focus of this course is on alcohol that is ingested. Numerous studies indicate that alcohol is not absorbed through the skin.

Absorption of the alcohol begins when the alcoholic beverage is placed in a persons mouth (oral cavity). Some of the alcohol is absorbed in the mouth. Because the alcohol is initially absorbed in the mouth, an observation period for at least 15 minutes by the breath test operator is mandated by regulation. 501 CMR 2.55. After ten to twelve minutes, all mouth alcohol is absorbed. Tests given before this 15 minute wait period could be erroneously high due to mouth alcohol. Duplicate testing negates this problem.

The alcohol passes from the mouth into the stomach and then into the small intestines. Most absorption of alcohol takes place in the small intestine.

The rate at which alcohol is absorbed can be effected by the following factors:

1. The amount and nature of the stomach content;
2. The amount of alcohol present in the ingested drink; and
3. The temperature of the body and of the environment.

The alcohol is distributed to all organs and tissues containing water. Because the alcohol is found in the water content of the body; BAC levels will vary with body weight as well as with water content of the body. The equilibrium between the arterial blood alcohol and the brain alcohol is reached very quickly.

ABSORPTION= ORGANS AND TISSUES WITH WATER

DISTRIBUTION = PROPORTIONAL TO WATER AMOUNT OF EACH ORGAN
AND TISSUE

SECTION 3.2 METABOLISM OF ALCOHOL

Once alcohol is ingested and absorbed, the body has a mechanism for eliminating the alcohol from the body. The alcohol can be metabolized, excreted or evaporated.

The liver is the major organ of metabolism. The liver changes/ metabolizes the alcohol to acetaldehyde and then to acetic acid. Over 90% of the alcohol is metabolized by the liver.

Some alcohol is excreted unchanged in the urine. Because the urine contains water, it will contain alcohol. The urine can be tested for the alcohol content. To properly obtain a urine alcohol, the person must void totally, then a sample is collected 30 minutes later for testing. Some states give the defendant a choice of providing a urine sample instead of blood or breath.

A small percentage of alcohol is simply sweated out of a person's body. Sweat contains water. If an individual is drinking alcohol, the sweat would also contain a small amount of alcohol. No test has been implemented at this time to test sweat for alcohol levels.

The remainder of the alcohol is exhaled on the person's breath. Expired air(exhaled air) contains moisture(water). If an individual is drinking alcohol, the expired air would contain alcohol in the water vapors.

Because expired air contains alcohol, a breath testing instrument can be used to determine the presence of alcohol in an individual's breath sample. The amount of alcohol present in the breath sample can be correlated to the individual's blood alcohol level at the time the test was administered.

MAJOR METABOLISM = LIVER

MINOR METABOLISM = URINE, SWEAT, BREATH

SECTION 4.0 BREATH ALCOHOL v. BLOOD ALCOHOL

SECTION 4.1 RESPIRATORY SYSTEM

The respiratory system deals with inhaling (inspired) and exhaling (expired) air. The body breathes in nutrients that are present in the air. The nutrients go into the air sacs in the lungs and diffuse into the blood system. The lungs eliminate material in the body that the body no longer can use. The lungs diffuse the material into the air sacs and the material is breathed out.

The lungs are composed of numerous air sacs or alveoli. In contact with the alveoli are capillaries. Capillaries carry blood. If a person has ingested alcohol it would be found in the person's blood. The alcohol diffused from the capillary blood into the alveoli or air sacs. It is then exhaled on the persons breath. This is part of the normal process by which the body eliminates alcohol.

CAPILLARIES = CARRY BLOOD

AIR SACS = ALCOHOL DIFFUSED FROM CAPILLARIES CAPILLARIES

SECTION 4.2 DEEP LUNG AIR

In order to get a true indication of a person's BAC level using a breath sample, the proper type of breath sample must be collected. Only deep lung air, also called alveoli air, would give an accurate indication of a person's blood alcohol. Mixed expired air, air which contains mouth, throat, upper lung and lower lung air would give a lower blood alcohol reading. All certified breath testing instruments in the Commonwealth can distinguish between deep lung air and mixed expired air.

BREATH = WATER AND ALCOHOL

DEEP LUNG AIR = ALVEOLI AIR

If an individual does not blow enough deep lung air into an infrared breath testing instrument, the result will be deficient sample and no alcohol level will be shown. If an individual blows mixed expired air into the instrument, the ticket will show invalid sample. The instrument knows the air is not coming from deep in the lungs.

INVALID SAMPLE = MOUTH ALCOHOL

DEFICIENT SAMPLE = NOT ENOUGH DEEP LUNG AIR

SECTION 4.3 RELATIONSHIP OF BLOOD v. BREATH ALCOHOL

Because a person exhales alcohol on their breath, breath testing instruments could be designed to detect the presence of alcohol in a breath sample. It is not enough to say that the person has been drinking alcohol. It is important to be able to tell how much alcohol is present at the time the person is tested.

Henry's Law makes it possible to quantitate the amount of alcohol in a breath sample and report not breath alcohol, but blood alcohol. Henry's Law defines the relationship between a gas and a liquid. In breath testing, the gas is the deep lung air and the liquid is the blood. Henry's Law states that a relationship exists between the amount of alcohol present in the breath and the amount of alcohol present in the blood.

The relationship between breath and blood, as defined in Henry's Law, never changes. The relationship is independent of how many drinks were consumed; whether the person is male or female; how much the person weighs; how much a person ate; as well as many other factors. It is possible to state that at 34 degrees centigrade, breath temperature; there will always be 2100 times more alcohol found in the blood than in the breath.

EX1. BREATH ALCOHOL = 0.0001% BLOOD ALCOHOL = 0.2100%

EX2. BREATH ALCOHOL = 0.0002% BLOOD ALCOHOL = 0.4200%

Because Henry's Law is applicable to all breath testing, it was possible to design an instrument that tests an individual's breath, but reports the individual's blood alcohol.

HENRY'S LAW

BLOOD = LIQUID BREATH = GAS
CAN TELL HOW MUCH ALCOHOL PRESENT ON BREATH

SECTION 4.4 2100:1 RATIO

The 2100:1 ratio was at issue in a landmark case, State v. Downie, 117 N.J. 450, 569 A.2d 242 (1990), cert denied, 111 S. Ct. 63 (1990). Numerous expert witnesses from around the world testified to the validity of the 2100:1 ratio.

Included in the testimony, were statements from Dr. Kurt Dubowski. Dr. Dubowski stated that blood alcohol test results as determined by conversion of a breath sample test using the 2100:1 blood/ breath ratio result in:

1. 86% of the blood alcohol results are under reporting venous ethanol levels in the post absorptive stage. These individuals would have a ratio greater than 2100:1, for example 2300:1.
2. 11.7% of the blood alcohol results would be equal to the breath alcohol result. These individuals would have a ratio of 2100:1.
3. 2.3% of blood alcohol results would be over estimating the individual's blood alcohol. These individuals would have a ratio below 2100:1, for example 1800:1.

The court in Downie affirmed New Jersey's practice of administering two breath tests which must agree within 0.01 of each other. The court further summarized that the 2100:1 ratio is biased in favor of the accused. The reasoning of the court included:

1. Using 2100:1 ration will underreport the person's blood alcohol by 9-10% when compared to a venous whole blood sample that is simultaneously drawn.
2. The instrument always truncates the reading, giving the person the benefit of anywhere from a 0.001 to 0.009 being subtracted from their actual BAC level.
3. The lower value of two consecutive readings is used as proof.

All instruments in the Commonwealth use the 2100:1 ratio. All results are truncated; the machines do not round up or down. Regulations indicate that the lower of the two readings is to be used as the defendant's BAC. 501 CMR 2.57.

2100 : 1
BLOOD : BREATH RATIO

SECTION 4.5 BAC LEVELS

At any given time a person's blood alcohol level can be:

1. Increasing;
2. Decreasing;
3. Remaining the same.

A breath test operator should never routinely try to estimate a person's BAC level over a given time period. The test results obtained are an accurate indication of the individual's BAC level at the time the test was administered.

The time of the last drink, what type of drinks were ingested, and what and when the person last ate are some of the factors which would effect retrograde extrapolation.

An individual could appear to be "more intoxicated" than the BAC indicates. Several conditions could make an individual appear more intoxicated. They include:

1. Diabetes;
2. Epilepsy;
3. Trauma;
4. Drugs when combined with alcohol which add to the effect of alcohol; and

5. Drugs having a synergistic effect; One drink plus one dose of drugs equals an effect greater than two doses of alcohol or drugs.

SECTION 4.6 METABOLISM RATE

The rate at which an individual eliminates alcohol from their body is their metabolism rate. The metabolism rate of alcohol cannot be increased by exercise or the ingestion of stimulants such as caffeine. The normal rate of metabolism for alcohol is constant at the rate of 0.015% / hour.

METABOLISM RATE = 0.015% METABOLISM RATE

SECTION 5.0 INFRARED BREATH TESTING INSTRUMENTS AND SIMULATORS

SECTION 5.1 DEFINITION OF INFRARED

Infrared is defined as the area of the electromagnetic spectrum between the visible and the microwave regions. The electromagnetic spectrum contains the following kinds of light:

Gamma Rays X-Rays Ultraviolet Vis Infrared Micro and Radio

When infrared light passes through a transparent medium, the light can be absorbed, reflected or transmitted. Breath testing looks at the light that is absorbed in the infrared region of the electromagnetic spectrum. The infrared region is found between 0.8 and 1000 microns (μ). Breath testing instruments all have infrared sources, or light bulbs. The source emits light in the infrared region of the electromagnetic spectrum.

Each molecule of ethanol absorbs infrared light at particular wavelengths within the electromagnetic spectrum that are unique to ethanol. No other compound will absorb energy/ light at the same wavelength ethanol does.

ETHANOL = DETECTED IN INFRARED REGION

SECTION 5.2 LAMBERT- BEER'S LAW OF ABSORPTION

Infrared breath testing instruments can be used not only to detect ethanol, but to tell how much ethanol is present in a sample of breath. It is possible to tell how much alcohol is present in a person's breath by using Lambert-Beer's Law of Absorption.

Beer's Law states that a relationship exists between light passed through an absorbing material and the amount of light

absorbed. This relationship can be measured or quantified. The light used in breath testing is infrared light given off by the source. The absorbing material is the ethanol molecules present in the deep lung air sample. The amount of light the alcohol molecules absorb is used to calculate the BAC level.

LIGHT = INFRARED

ETHANOL = ABSORBS LIGHT

SECTION 5.3 BACKGROUND ON INFRARED INSTRUMENTS

Scientists have been using infrared instruments for about 100 years. All breath testing instruments in Massachusetts used by law enforcement are infrared breath testing instruments. Infrared technology can be used to identify organic compounds. Alcohol is an organic compound. An infrared breath testing instrument takes pictures of the organic compounds present on an individual's breath. An infrared "picture" of an organic compound can positively identify the compound to the exclusion of all other organic compounds. A fingerprint identifying a person is analogous to an infrared "picture" identifying an organic compound.

Not only can infrared technology be used to identify ethanol; it can also be used to tell how much alcohol is present in the breath sample. This quantitative ability is what makes infrared technology a valuable tool to law enforcement. Infrared breath testing instruments have been used by law enforcement since the early 1980's.

Infrared breath testing instruments serve as a confirmation of an officer's probable cause. A defendant must be placed under arrest for "operating under the influence" before the officer can even offer a breath test. A defendant in the Commonwealth has no statutory or constitutional right to a breath test. If an officer decides to offer a test to determine the amount of alcohol present in the defendant's system, the test being offered at the police station, by statute is breath. If the defendant has been taken to a medical facility for treatment and has been placed under arrest, the officer is to offer the defendant a blood test, by statute. The defendant has no right to a comparison test unless they first take the police administered test.

The defendant must consent to take a breath test. Massachusetts is not an implied consent state.

SECTION 5.4 INFRARED ANALYSIS OF BAC LEVELS

All infrared breath testing instruments in the Commonwealth operated on the same scientific principles. All instruments

consists of the same basic components. Each instrument has:

1. Breath tube: All instruments have a heated breath tube external to the infrared instrument. The tube is heated to breath temperature. If the breath tube is not heating up, the alcohol present in the breath will condense and collect on the cool surfaces of the breath tube. This will result in an erroneously low BAC level.
2. Breath switch and timer: The breath passes over a sensor / switch which uses a combination of pressure, volume, and temperature coupled with time to determine the type of breath sample being introduced into the instrument. The instrument is programmed to collect a sample of deep lung air. When the proper parameters are met indicating a deep lung air sample, the instrument will then begin to collect the deep lung air for analyses. This feature negates erroneous readings due to mouth alcohol or to external contamination.
3. Breath chamber: Deep lung air is collected in a breath chamber. The breath chamber is also heated to keep the alcohol molecules in the vapor state.
4. Light source and filter: The light source is a light bulb emitting light in the infrared region of the electromagnetic spectrum. The filter serves to differentiate or break up the infrared light. The instrument wants to take a "picture" of the deep lung air. The picture will determine how much infrared light is absorbed by the ethanol molecules present at 3.4 microns. How much light is absorbed by "interferents" at 3.38 microns will also be determined. How much light is absorbed by room air, if any, will also be determined. The light absorbed by the room air is commonly referred to as a base line. The instrument calls this "air blank".

The filter chops the infrared light; allowing only light at certain wavelengths to pass into the breath chamber. Filters include mirrors, prisms, and gratings.
5. Detector: If alcohol molecules are present in the breath chamber, they will absorb some of the infrared light. The amount of light absorbed by the ethanol molecules can be measured. The amount of light absorbed is measured by the detector.
6. Processor: The processor is the brain of the infrared

breath testing instrument. The microprocessor can take the amount of light absorbed in the breath sample collected and convert it to a BAC level.

SECTION 5.5 DEFINITION OF A SIMULATOR

A simulator is a device which simulates a person blowing into a breath testing instrument. The simulator is external to the breath testing instrument. All evidentiary tests given in Massachusetts include a simulator test. The simulator confirms that the instrument can properly quantitate alcohol on a person's breath contemporaneous to the defendant's actual test.

SECTION 5.6 COMPONENTS OF A SIMULATOR

A simulator consists of a jar which contains simulator solution. Simulator solution is water containing a known amount of alcohol. All simulator solution in use in the Commonwealth by law enforcement has a value of 0.15%. All simulator solution is supplied by the Office of Alcohol Testing. The second component of the simulator is the top which screws onto the jar. The top of the simulator contains a heating element, a paddle wheel, a bubble tube, an inlet and an outlet opening.

The heating element, which extends into the simulator solution warms the solution to breath temperature, 34 degrees centigrade. The paddle wheel mixes the alcohol/water solution to evenly distribute the heat and to prevent overheating of the solution. The bubbler acts to agitate the simulator solution.

Due to Henry's Law, the alcohol in the water will produce an alcohol vapor in the air that will remain constant. The water is like the blood, the vapor is like the deep lung air.

SIMULATOR = ACTS LIKE PERSON TAKING TEST

The breath testing instrument will draw the vapor off the top of the simulator solution. The vapor will be placed in the breath chamber and tested as if it were a person's breath sample.

SECTION 5.7 VALID SIMULATOR READINGS

All simulator solution in Massachusetts has a value of 0.15%. If the instrument reads 0.14%, 0.15%, or 0.16% when testing the simulator solution, it indicates that the instrument and simulator are operating properly.

If a result other than 0.14%, 0.15%, or 0.16% is obtained, the officer must give the person the opportunity to take a new breath

test. 501 CMR 2.56.

If the officer fails to turn on the simulator, resulting in a 0.07%, 0.08% or 0.09% reading; or does not wait for the solution to warm up, a result other than 0.14%, 0.15% or 0.16% will be obtained. After waiting for the simulator to be at proper temperature, the officer will then be able to administer a breath test.

SECTION 5.8 TYPES OF SIMULATORS

There are several types of simulators in use in the Commonwealth.

A. Smith & Wesson Mark IIA

The Smith & Wesson Mark IIA is a green topped simulator with a glass jar. It contains a straight thermometer to visibly check the temperature of the solution. It also has a small orange light on the top that is on when the solution is being heated to proper temperature. When the solution is at proper temperature, the light goes out.

B. Guth

The Guth simulator, Model 34C, has a large, heavy silver top and a glass jar. It can have a straight thermometer and / or a dial thermometer. It has a small light on the side of the jar to indicate the power is on. It has a second small light that is on when the solution is being heated. Once the solution is up to temperature, the light goes off.

The Guth simulator, Model 10-4 is a smaller version of the Model 34C. The power light, on/off switch, and heater switch are toggle buttons across the top of the simulator. A straight and/or rotary thermometer indicate the simulator is at proper temperature.

C. Toxitest

The Toxitest simulator consists of a lexan jar and a black screw top with stabilizing legs. It has a bent thermometer to check the temperature of the solution. No light is on when the simulator is heating up. The light comes on when the simulator is at proper temperature, indicating it is ready to be used.

D. Luckey

The Luckey simulator consists of a silver top and a glass jar. It has a dial thermometer on the top. It has a small power light indicating the power is on. It has a second light indicating the simulator is heating up. When the simulator has reached proper

temperature, the light will go out.

E. Protection Device

The Protection Device simulator has a black top and a glass jar. It has a small light that indicates the simulator solution is being heated. When the solution is at temperature, the light goes off. The simulator has a straight thermometer which visible indicates when the solution is at 34 C.

SECTION 6.0 BREATH TESTING PROCEDURES

SECTION 6.1 OPERATIONAL PROCEDURE CHECKLIST

The Office of Alcohol Testing has designed Operational Procedure Checklists for each infrared instrument in use in the Commonwealth. The checklist, OPC, must be used each time an evidentiary breath test is given. Checklists for all instruments can be found in the Addendum, A- 9- 13. All checklists have been updated to include a line to check off that the defendant has been advised to his or her right to a comparison test. An additional line is present to check that the breath test operator enters the breath test result into the Breath Test Log, found in section one of the department's Maintenance and Use Log.

The operational procedure checklist serves many functions. If completed properly, it protects the officer from many alleged defenses. The operational procedure checklist:

1. Identifies the defendant.
2. Identifies the certified operator performing the test.
501 CMR 2.53.
3. Is proof that the defendant was observed for at least 15 minutes. 501 CMR 2.55.
4. Identifies the certified instrument used to perform the test.
501 CMR 2.55.
5. Identifies that a certified simulator was use to perform the test. 501 CMR 2.55.
6. Identifies the simulator solution that was used to test the defendant. 501 CMR 2.43.
7. Indicates that the proper testing sequence was performed. 501 CMR 2.56.
8. Indicates that a valid test was administered, with the two breath samples agreeing within +/- 0.02%, and the simulator reading being a 0.14%, 0.15%, or 0.16%. 501 CMR 2.56(2).

9. Advises the defendant that a right to a comparison blood test exists after completion of a valid test; and that the blood test results can be used at a hearing to restore the defendant's license. M.G.L. c.90, s.24.
10. Is used to attach a hard copy printout of the defendant's test results to.
11. Reminds the breath test operator to record the test results in the breath test log. 501 CMR 2.57.

SECTION 6.2 BREATH TEST LOG

The Breath Test Log is the first section in the Maintenance and Use Log. Directions for its use are found in the Maintenance and Use Log Guidelines. (See A-14). All valid breath tests must be entered into the Breath Test Log (A- 15) by the breath test officer. 501 CMR 2.57.

Many times an officer forgets to enter the breath test in the Breath Test Log shortly after the test is given. The intent of the Breath Test Log is to document use of the instrument over a period of time. When the regulations went into effect in 1987, there was still doubt as to whether or not the instruments worked properly. The breath test log documents that the instrument is working properly not only when the defendant is tested, but over a contemporaneous period of time.

All breath tests shall be entered into the breath test log by the breath test operator after the test is administered. The bottom of each operational procedure checklist has a check off to be completed when the result is entered into the log.

Some departments enter protective custody breath tests in the Breath Test Log. Only valid evidentiary tests are required to be entered into the breath test log. 501 CMR 2.57. Any additional tests, for example, PC's, calibration tests, or self tests, can be entered into the breath test log. There is no requirement that they be so entered.

SECTION 6.3 UNIFORM FORM

All valid breath test must be reported on a sequentially numbered uniform form to the Office of Alcohol Testing. M.G.L. c.90, 24k. The uniform form is found in the Criminal Justice Information System as a preformatted screen, AM BT. An officer merely fills in the blanks and transmits the message to OAT. (See A-18). All valid tests, regardless of the test result, must be sent to OAT. 501 CMR 2.57.

SECTION 7.0 RESPONSIBILITIES OF A BREATH TEST OPERATOR

SECTION 7.1 PREPARING THE INSTRUMENT AND SIMULATOR FOR A TEST

1. Turn instrument and simulator on. NOTE: All breath test equipment should be left off when not in use.
2. Make sure there is no mouthpiece on the end of the blow tube to inhibited the purge cycle.
3. Prepare top of operational procedure checklist, if required. Instruments with keyboards print all the necessary information on the top of the test ticket.
4. Have a mouthpiece and a test ticket ready.
5. Check to see if the simulator is at proper temperature and if the instrument is READY. The proper simulator temperature is 34.0 C.
6. Check that the individual has been properly told of their opportunity to submit to a chemical test and has consented to take such a test. A standardized statutory rights and consent form must be used, Form A.

SECTION 7.2 ADMINISTERING A BREATH TEST

1. Check the time to confirm you have been observing the subject for at least fifteen minutes.
2. Press the start test button. Follow the procedures on the appropriate operational procedure checklist. Allow the instrument to air blank before putting on the mouthpiece for the defendant's test.
3. Remove the defendant's mouthpiece after each defendant's test. One mouthpiece can be used for all breath samples supplied by the defendant. To prevent the spread of infectious diseases, the plastic bag the mouthpiece comes in can be used to remove the mouthpiece between each test. If infectious diseases are a serious concern, take appropriate precautions.
4. Once the testing procedure is completed in accordance with the operational procedure checklist, and the test results indicate a valid test, advise the defendant to his/her right to a comparison blood test.

5. All valid evidentiary tests are to be placed in the Breath Test Log by the breath test operator, found in section one of the Maintenance and Use Log.

SECTION 7.3 VARIATIONS WHEN ADMINISTERING A BREATH TEST

1. If the defendant will only supply one breath and does not complete the breath testing sequence, the subject is considered a refusal ; fill out Form B, sides 1 and 2, and Form D, F, or G if applicable. Keep the incomplete ticket and operational procedure checklist.
2. If the simulator is not 0.14%, 0.15%, or 0.16%; check the simulator before retesting the subject. Test for:
a) the proper temperature; b) a tight seal; c) a crack in the jar; d) a spinning propeller; and e) properly connected hoses.
3. If the subject blows a deficient sample, allow the subject the opportunity to take another test. If the subject refuses, fill out the appropriate forms. Keep the incomplete test ticket and the operational procedure checklist.
4. If the defendant consents to take a breath test and due to an equipment malfunction the test can not be completed at the arresting department, the defendant must be given the opportunity to consent to a new breath test. 501 CMR 2.56(2).
5. Numerous individuals with one lung have been able to complete valid tests. There is no medical exception in the M.G.L. c.90, s. 24k for people with emphysema. Medical exceptions are diabetics, hemophiliacs, and any other condition requiring the use of anticoagulants. Also note these medical exceptions apply only to blood tests not breath tests.
6. If a subject has a blood alcohol above a 0.20%, it is sometimes more difficult to get 0.02% agreement. This is due to variations in the individuals breath, not the instrument. In these cases, count for the same number of seconds each test and stop the test at the same count each time. Remember test records are on file at OAT to indicate the accuracy of your instrument. The periodic tests of your simulator very clearly indicate the repeatability of the instrument.
7. The argument that because the simulator is 0.14%, the subject's 0.08% is a 0.07% has no scientific validity. The variation is due to the simulator. The solution

value decreases each time a simulator test is done. The simulator might not be at proper temperature. The room air being drawn across the top of the simulator may be cool, lowering the results. What has a scientifically reliable foundation is the fact that the individual's blood alcohol as determined by his/her breath is approximately 9% lower than his/her true blood alcohol as determined by a blood sample. Remember you also report the lower of the defendant's two readings, and the instrument truncates the results.

8. If you have an air blank of anything but 0.00%, do not use the instrument.
9. If the date and/or time on the test ticket are incorrect, write the correct date and time on the ticket and initial your corrections. Notify the officer in charge that the instrument is printing an incorrect date and time. The Officer in Charge can make arrangements to have the battery replaced. Even if the date and time are incorrect, the instrument will still properly quantitates an individual's blood alcohol.
10. If your department has an model Intoxilyzer 5000 and a ticket gets jammed in the printer, do not rip the ticket out of the printer. To free the ticket, hit the start test button two times to invalidate the testing sequence and release the ticket. If the ticket is still jammed in the printer, do not try pry the ticket out. Call the service engineer to arrange for the printer repair.

SECTION 8.0 PRESENT OUI STATUTE

SECTION 8.1 THE 0.08% BILL

Governor William Weld signed Act 25 of 1994 into law at 10:20 A.M. on May 27, 1994. The "0.08% Bill" significantly changed the fines and penalties incurred by individuals arrested for operating under the influence of alcohol.

The statute allows for immediate license suspension for individuals arrested and charged with driving under the influence if:

- a) the individual refuses to take a breath test; or
- b) the individual is over 21 years of age and has a breath test result of 0.08% or greater; or
- c) the individual is under 21 years of age and has a breath test result of 0.02% or greater.

The statute allows previous convictions for OUI to be counted from any court in the Commonwealth and any other jurisdiction for a period of ten years prior to determine the pending charge. Third, fourth, and fifth offenses can be either misdemeanors or felonies. Prior convictions are also counted for a ten year period when determining the length of time a license is administratively suspended by the Registrar due to a defendant's failure to take a breath test.

In conjunction with the passage of Act 25 of 1994, the 0.08% Bill, the Registrar of Motor Vehicles distributed a packet of forms to be used in each OUI arrest. These Forms, A-G can be found in the Addendum A- 18 - 27.

SECTION 8.2 STATUTORY RIGHTS AND CONSENT FORM

If your department has a policy to offer breath tests to defendants arrested for OUI, you must first fill out Form A, the Statutory Rights and Consent Form. Nothing in the new law mandates that breath tests be offered. A defendant under arrest in the Commonwealth has no constitutional or statutory right to a police administered breath test. Commonwealth v. Alano, 388 Mass. 871 (1983).

The officer must read each section of Form A to the defendant. There is no obligation on the part of the police officer to explain how long a defendant could lose their license or right to operate except to tell the defendant it will be for a period of at least 120 days. No explanation has to be given about suspensions or hearings.

SECTION 8.3 BREATH TEST REFUSALS

ALL OF THE FOLLOWING CLASSIFICATIONS APPLY TO:

1. DEFENDANT IS PLACED UNDER ARREST; AND
2. DEFENDANT REFUSES TO TAKE A BREATH TEST.

If a subject is placed under arrest for a Chapter 90 section 24 offense , and refuses to take a breath test, a police officer is required to do the following under Ch. 90, s. 24 (1) (f) (1):

A. VALID MASSACHUSETTS LICENSE CLASS D, M OR PERMIT IN POSSESSION

If a defendant has a valid Massachusetts Class D or M driver's license or permit and refuses the test:

1. Fill out Form A.
2. Fill out Form B, page 1 and 2.
3. Take the defendant's license and place it on the bottom

of Form D. Copy the completed Form D. Cut the Massachusetts license in half and destroy the license.

4. Fax completed Form A, B, side 1 and 2, and Form D to the Registry at (617) 351-9276.
5. Give the original page 1 of Form B to the defendant. Keep a copy for you records.
6. The defendant is held on the pending charges.

NOTE: If you have arrested the defendant while driving a CDL vehicle and the defendant only has a Class D license, they are driving out of class and are considered unduly licensed , Chapter 90 section 10.

B. VALID OUT OF STATE CLASS D OR M LICENSE IN POSSESSION

If a defendant has a valid out of state license in possession:

1. Fill out Form A.
2. Fill out Form B, page 1 and 2.
3. Do not take the driver's license. The defendant's right to operate in the Commonwealth will be suspended. The Commonwealth will then notify the issuing state. The issuing state will take action on the license if appropriate.
4. Fax Form A, Form B, side 1 and 2 to the Registry at (617) 351-9276.
5. Give the original page 1 of Form B to the defendant. Keep a copy for your records.
6. The defendant is held on the pending charges.

C. NO LICENSE IN POSSESSION

If the defendant has no license in possession:

1. Run a LEAPS check to determine state and status of license.
2. Chapter 90, section 21 gives you the authority to arrest out of state operates for being unduly licensed.
3. Chapter 90, section 10 indicates that operating without being duly licensed is an offense.
4. Fill out Form A.
5. Fill out Form B, pages 1 and 2.
6. Fax Form A, and Form B, page 1 and 2 to the Registry at (617) 351-9276.
7. Give the original page 1 of Form B to the defendant. Keep a copy for your records.
8. The defendant is held on the pending charges.

VALID MASSACHUSETTS LICENSE, CLASS A, B, OR C OR PERMIT IN POSSESSION

If a defendant has a valid Massachusetts license, Class A, B, or C, or permit, you must first determine the type of vehicle being operated when placed under arrest:

D. Was the defendant operating his or her passenger vehicle? If yes,

1. Fill out Form A.
2. Fill out Form B, page 1 and 2.
3. Take the defendant's license and place it on the bottom of Form D. Copy the completed form. Cut the license in half and destroy.
4. Fax Form A, Form B, page 1 and 2 and Form D to the Registry at (617) 351-9276.
5. Give the original page 1 of Form B to the defendant. Keep a copy for your records.
6. The defendant is held on the pending charges.

E. Was the defendant operating his or her CDL vehicle ? If yes,

1. Fill out Form A.
2. Fill out Form B, page 1 and 2.
3. Take the defendant's license and place it on the bottom of Form D. Copy the completed form. Cut the license in half and destroy the license.
4. Fill out Form F.
5. Fill out Form G.
6. Fax Form A, Form B pages 1 and 2, Form D, Form F and Form G to the Registry at (617) 351-9276.
7. Give the defendant the original page 1 of Form B and the original Form G. Keep copies for your records.
8. The defendant is held on the pending charges.

F. VALID CLASS A, B, OR C LICENSE OR PERMIT ISSUED BY STATE OTHER THAN MASSACHUSETTS

If a defendant has a valid Class A, B, or C license or permit issued by a state other than Massachusetts and refuses a breath test, follow the steps for D and E, except for Form D. Do not take possession of the out of state license. The issuing state will be notified by the Registry and will take any necessary action in the issuing state.

SECTION 8.4 BREATH TESTS

ALL OF THE FOLLOWING CLASSIFICATIONS APPLY TO:

1. DEFENDANT HAS BEEN ARRESTED; AND
2. DEFENDANT TAKES A BREATH TEST.

NOTE: Make sure that Form A has been completed prior to the administration of the breath test.

VALID MASSACHUSETTS LICENSE CLASS D, M OR PERMIT IN POSSESSION

If a defendant has a valid Massachusetts Class D or M license or permit and takes a breath test:

WHAT IS THE BREATH TEST RESULT?

G. If the result of the test is 0.00, 0.01:

1. No administrative action is taken. All defendants are released forthwith. Keep Form A and the completed operational procedure checklist. Send the uniform form AM BT found in CJIS to OAT.
2. The defendant is released forthwith on the OUI charge.

H. If the result of the test is 0.02, 0.03, 0.04, or 0.05, and the defendant is under 21:

1. Fill out Form C, pages 1 and 2.
2. Take the defendant's license and place it on the bottom of Form D. Copy the completed Form D. Cut the Massachusetts's license in half and destroy the license.
3. Fax completed Form A, Form C pages 1 and 2, and Form D to the Registry at (617) 351-9276.
4. Give the original page 1 of Form C to the defendant. Keep a copy for your records.
5. Send the uniform form AM BT found in CJIS to OAT.
6. The defendant is released forthwith on the OUI charge.

I. If the results of the test are 0.02, 0.03, 0.04 or 0.05 and the defendant is over 21:

1. No administrative action is taken. The defendant is released forthwith. Keep Form A and the completed operational procedure checklist. Send the uniform form AM BT found in CJIS to OAT.
2. The defendant is released forthwith on the OUI.

J. If the defendant is a 0.06 or a 0.07 and is under 21:

1. Fill out Form C, pages 1 and 2.
2. Take the defendant's license and place it on the

bottom of Form D. Copy the completed Form D. Cut the Massachusetts's license in half and destroy the license.

3. Fax Form A, Form C, pages 1 and 2, and Form D to the Registry at (617) 351-9276.
4. Give the defendant the original page 1 of Form C. Keep a copy for your records.
5. Send the uniform form AM BT found in CJIS to OAT.
6. The defendant is held on the pending OUI charge.

K. If the defendant is a 0.06 or 0.07 and is **over 21**:

1. The defendant is held on the pending charge.
2. Keep Form A and the completed operational procedure checklist. Send the uniform form AM BT found in CJIS to OAT.

L. If the defendant is a **0.08 or above, any age**:

1. Fill out Form C, pages 1 and 2.
2. Take the defendant's license and place it on the bottom of Form D. Copy the completed Form D. Cut the Massachusetts's license in half and destroy the license.
3. Fax Form A, Form C, pages 1 and 2, and Form D to the Registry at (617) 351-9276.
4. Give the defendant the original page 1 of Form C. Keep a copy for your records.
5. Send the uniform form AM BT found in CJIS to OAT.
6. The defendant is held on the pending charges.

M. VALID OUT OF STATE LICENSE IN POSSESSION

1. Do not take possession of the license.
2. Do not fill out Form D.
3. Dependent upon age and breath test result, do all of the above, G- L, except Form D.

N. NO LICENSE IN POSSESSION

If the defendant has no license in possession:

1. Run a LEAPS check to determine the state and status of the license.
2. Chapter 90, section 21 gives you the authority to arrest out of state operators for being unduly licensed.
3. Chapter 90, section 10 indicates that operating without being duly licensed is an offense.
4. Fill out the appropriate forms, except Form D, as above, dependent upon age and breath test result.

VALID MASSACHUSETTS LICENSE, CLASS A, B, AND C OR PERMIT IN POSSESSION

If a defendant has a valid Massachusetts license, Class A, B and C in possession, you must first determine the type of vehicle being operated when placed under arrest:

0. Was the defendant operating his or her passenger vehicle?
If yes,

1. Follow the steps appropriate to the age and breath test result of the defendant if G through L.
2. If the defendant is **under 21** and has a breath alcohol level of **0.02%** or above, or if the defendant is **over 21** and has a breath alcohol level of **0.08% or above** the defendant will lose his Class A, B, or C license in addition to his Class D or M license.
3. Forms E and G do not have to be filled out because the defendant was not operating a commercial motor vehicle at the time of the stop.

Was the defendant operating his or her CDL vehicle?
If yes,

P. If the breath test result is **0.01, 0.02 or 0.03** and the defendant is **over 21**, or the breath test result is **0.01** and the defendant is **under 21**:

1. No action will be taken on the Class D license.
2. Fill out Form G.
3. Fax a copy of Form A and Form G to the Registry at (617) 351-9276.
4. Give the original Form G to the defendant. Keep a copy for your records.
5. Send a uniform form AM BT found in CJIS to OAT.
6. The defendant is released forthwith from the OUI charge.

Q. If the breath test result is **0.02, or 0.03** and the defendant is **under 21**:

1. Fill out Form C, pages 1 and 2.
2. Take the defendant's license and place it on the bottom of Form D. Copy the completed Form D. Cut the Massachusetts license in half and destroy the license.
3. Fill out Form G.
4. Fax Form A, Form C pages 1 and 2, Form D, and Form G to the Registry at (617) 351-9276.
5. Send a uniform form AM BT found in CJIS to OAT.
6. The defendant is given the original page 1 of Form C

and the original Form G. Keep copies for your records.

7. The defendant is released forthwith from the OUI charge.

R. If the breath test result is 0.04 or 0.05 and the defendant is under 21:

1. Fill out Form C, pages 1 and 2.
2. Take the defendant's license and place it on the bottom of Form D. Copy the completed Form D. Cut the Massachusetts license in half and destroy the license.
3. Fill out Form E.
4. Fill out Form G.
5. Fax Form A, C, pages 1 and 2, D , E and G to the Registry at (617) 351-9276.
6. Send the uniform form AM BT found in CJIS to OAT.
7. The defendant is given the original page 1 of Form C, the original Form G. Keep copies for your records.
8. The defendant is released forthwith on the OUI charge.

S. If the breath test result is 0.04 or 0.05 and the defendant is over 21:

1. Fill out Form E.
2. Fill out Form G.
3. Fax Form A, E and G to the Registry at (617) 351-9276.
4. Give the defendant the original Form G.
Keep copies for your records.
5. Send the uniform form AM BT found in CJIS to OAT.
6. The defendant is released forthwith from the OUI charge.

T. If the breath test result is 0.06, 0.07 and the defendant is under 21:

1. Fill out Form C, pages 1 and 2.
2. Take the defendant's license and place it on the bottom of Form D. Copy the completed Form D. Cut the Massachusetts license in half and destroy the license.
3. Fill out Form E.
4. Fill out Form G.
5. Fax Form A, C pages 1 and 2, D, E and G to the Registry at (617) 351-9276.
6. Give the defendant the original page 1 of Form C, the original Form G. Keep copies for your record.
7. Send the uniform form AM BT found in CJIS to OAT.
8. The defendant is held on the pending OUI charge.

U. If the breath test result is 0.06 or 0.07 and the defendant is over 21:

1. Fill out Form E.

2. Fill out Form G.
3. Fax Form A, E and G to the Registry at (617) 351-9276.
4. Give the defendant the original Form G. Keep copies for your records.
5. Send the uniform form AM BT found in CJIS to OAT.
6. The defendant is held on the pending charges.

v. If the breath test result is 0.08 or above and the defendant is **any age**:

1. Fill out Form C, pages 1 and 2.
2. Take the defendant's license and place it on the bottom of Form D. Copy the completed Form D. Cut the Massachusetts's license in half and destroy the license.
3. Fill out Form E.
4. Fill out Form G.
5. Fax Form A, C pages 1 and 2, D, E, and G to the Registry at (617) 351- 9276.
6. Give the defendant the original page 1 of Form C, and the original Form G.
7. Send the uniform form AM BT found in CJIS to OAT.
8. The defendant is held on the pending charges.

w. **VALID CLASS A, B, OR C LICENSE or PERMIT FROM STATE OTHER THAN MASSACHUSETTS**

1. Do not take possession of license.
2. Do not fill out Form D.
3. Dependent of age and breath test result, do all of the above except Form D.

SECTION 8.5 BLOOD TEST

If a defendant is:

- a) under arrest for OUI;
- b) has been taken for treatment to a medical facility;
- c) in the Commonwealth;
- d) and the defendant consents to take a blood test.

Any person afflicted with hemophilia, diabetes or any condition requiring the use of anticoagulant can not be tested.

Follow the guidelines for drawing blood as found in the addendum, A- 28.

REMEMBER TO KEEP THE BLOOD REFRIGERATED BEFORE TRANSPORTING TO THE STATE POLICE CRIME LAB.

The officer should then:

1. Fill out Form A.
2. Fill out Form C, page 2 of 2, top one third.
3. Send page 2 of Form C, along with the blood to the State Police Crime Lab.
4. The certified blood analyst will test the blood and complete the second section of page 2 of Form C.
5. The prosecuting officer will present Form C, page 2 to the court for completion of the bottom section of page 2 Form C for the license suspension if:
 - a) the defendant is **under 21** and the blood alcohol is **0.02 or above**;
 - b) the defendant is **over 21** and the blood alcohol is **0.08 or above**.
6. If the defendant is **under 21** and the blood alcohol was **0.02 or above**, or if the defendant is **over 21** and the blood alcohol was **0.04% or above** and the defendant was driving a **commercial motor vehicle**:
 - a) Fill out Form E.
 - b) Fax Form C page 2, E and G (completed at time of incident) to the Registry at (617) 351-9276.
 - c) Give the original Form G to the defendant.Keep a copy for your records.
7. The court and the Registry are responsible for the license suspensions. Do not take the driver's license from the defendant. Do not fill out Form D.

SECTION 8.6 OPERATING UNDER THE INFLUENCE OF DRUGS

A police officer who has made an arrest for OUI/ drugs has no statutory authority to request any type of drug testing under Chapter 90 s. 24. If an arrest is made for OUI/ drugs, the officer needs to get the defendant's consent to obtain any type of sample to be tested. A urine sample is helpful to a chemist when requesting a general screening for drugs. A blood sample is necessary to confirm that the drugs are present in the blood system. It is the presence of drugs in the blood system that infers impairment, not the urine.

If the defendant makes an admission as to the type of drug or name of the drug, send the information with the biological samples to the State Police Crime Lab. If the type of drug is not known, basic officer observations as to the state of the defendant can be helpful to the chemist. Is the defendant lethargic or excited? Does the defendant have dilated or constricted pupils? Is the defendant aware of his surroundings? Answers to these and other similar type questions can assist a chemist in determining what class of drugs to screen for when a limited biological sample is supplied.

SECTION 8.7 COMMERCIAL DRIVERS AND 0.04%

The Commercial Motor Vehicle Safety Act of 1986 was passed by the Congress on October 26, 1986 and signed into law by the President on the following day. Because large semi-trailer trucks have a disproportional number of accidents to their numbers on the road, the CMVA was passed to control these large commercial vehicles and to improve their safety records.

As a result of this act, the Commonwealth passed M.G.L. c. 90F and promulgated 540 CMR 2.06 with an effective date of June 20, 1992. Since April 1, 1992 all drivers of commercial vehicles must have a CDL, a commercial drivers license.

A. LICENSE CLASSES

A CLASS A license covers any combination of vehicles with a gross combination weight rating of 26,001 pounds or more provided the vehicle(s) being towed is in excess of 10,000 pound.

A CLASS B license covers any vehicle with a gross vehicle weight rating (GVWR) of 26,001 pounds or more and/or towing not in excess of 10,000 pounds.

A CLASS C license covers any single vehicle less than 26,0001 pounds GVWR or any such vehicle towing another vehicle not in excess of 10,000 pounds GVWR, that is placarded for hazardous materials or designed to transport 16 or more persons including the operator.

B. ENDORSEMENTS

Related ENDORSEMENTS include:

- H- Hazardous Materials
- N- Tank vehicles
- P- Passenger vehicles
- T- Double/ triples
- X- Hazardous Material and Tank vehicle

C. EXEMPTIONS

Some operators have been exempted from this statute in the Commonwealth. Those operators exempted include: a) operators of emergency and fire fighting equipment; b) farmers; c) military personnel; d:) recreation vehicle operators; and e) off road construction equipment operators. 540 CMR 2.06 (6). These exemptions might not be honored in any other state.

D. CDL OFFENSES

M.G.L. c.90F and 540 CMR 2.06 are applicable only if the operator is driving a commercial motor vehicle at the time they are

stopped. Furthermore, M.G.L. c. 90F contains only administrative sanctions. All fines under C90F are \$ 35.00. An operator does not have to be under arrest to request them to submit to a blood, breath or urine test.

If an operator is tested under c.90F and the breath test result is higher than 0.05% they can not then be charged with a c. 90 s. 24 offense. M.G.L. c. 90 s. 24 clearly states a person is under arrest before they are given an opportunity to submit to a chemical test.

M.G.L. c. 90F, s.9 disqualifies any person from operating a Commercial Motor Vehicle, CMV, if:

1. Driving a CMV while under the influence of alcohol or drugs as provided in M.G.L. ch. 90, s. 24 ; or
2. Driving a CMV while the alcohol concentration of the persons blood or breath is 0.04% or more.

M.G.L. c. 90F, s. 10 states that a person may not drive, operate, or be in physical control of a CMV while **having alcohol in his system**. This means any alcohol above 0.00%. A person who has alcohol in his system, that is 0.01%, 0.02% and 0.03% shall be **placed out of service for twenty four hours**. A person who refuses to take an alcohol concentration test, (breath or blood test), shall also be **placed out of service for twenty four hours**. If the person operates a CMV during the 24 hour period the operator is operating without being duly licensed. 540 CMR 2.06(5).

M.G.L. c.90F, s. 11 states that any person who operates a CMV in the Commonwealth shall be deemed to have given consent to a **test or tests** of that person's blood, breath, or urine for alcohol or drugs.

E. TESTING THE CDL DRIVER FOR ALCOHOL

Presently, any testing for alcohol of a person driving a CMV should be done by a certified breath test operator following the same procedures used for other c.90 s. 24 cases. No system has been set up in the Commonwealth to test operators of CMV for drugs or for alcohol in urine.

It further states that a test or tests may be administered at the direction of a law enforcement officer , who after stopping or detaining the operator of a CMV, has probable cause to believe that the operator was operating a CMV with alcohol in his system. A refusal to submit to a test for alcohol will result in that person being disqualified from operating a CMV. Said person must be informed of same.

An officer **must** submit a sworn report to the Registrar if:

1. The operator refuses to take a test; or
2. The operator is tested and has an alcohol concentration of 0.04% or more.

Upon receipt of the sworn statement, the Registrar shall disqualify the driver from driving a CMV for a period of one year; three years if transporting hazardous materials. The only present sanction in the c.90 for operating under the influence of drugs seems to be a 24 hour out of service order. C. 90F s. 11 (E) does not include drug violations.

When issuing a citation to an operator of a commercial motor vehicle, you must answer the following questions:

1. Does the operator have a CDL license? Yes/No;
2. Is the operator driving a CMV? Yes/No;
3. Is the vehicle placarded for hazardous materials? Yes/No.

If these questions are not answered correctly ,an incorrect administrative suspension may be ordered.

SECTION 8.8 SERUM ALCOHOL

In many OUI cases, the operator is taken to the hospital to receive medical treatment. Many times the only alcohol results available on these operators are located in the hospital records.

Hospitals normally test serum samples for the presence of alcohol. Serum alcohol levels are higher than blood alcohol levels. To change a serum alcohol to a blood alcohol, the serum conversion chart can be used. The serum conversion chart is found in an article entitled " Hospital Records and Serum Alcohol" found in A-29 - 36.

Three useful cases to assist in the introduction in the serum conversion chart are Comm. v. Dube, 413 Mass. 570 (1992), Comm. v. Russo, 30 Mass. App. Ct. 923 (1991) and Comm. v. Sargeant, 24 Mass. App. 657, review den 401 Mass 1101 (1987) .

ADDENDUM

BREATH TEST OPERATOR'S CERTIFICATE.....	A-1
BREATH TEST OPERATOR'S RECERTIFICATION CERTIFICATE.....	A-2
COMPLETED OPERATIONAL PROCEDURE CHECKLIST.....	A-3
STATE POLICE BREATH TEST OPERATOR CERTIFICATE.....	A-4
STATE POLICE BREATH TEST OPERATOR RECERTIFICATION.....	A-5
LIST OF APPROVED INSTRUMENTS.....	A-6
LIST OF APPROVED SIMULATORS.....	A-7
INTOXILYZER MAINTENANCE.....	A-8, 9
BAC VERIFIER MAINTENANCE.....	A-10
DATAMASTER MAINTENANCE.....	A-11
SMITH & WESSON 2000 MAINTENANCE.....	A-12
INSTRUMENT AND SIMULATOR CERTIFICATE.....	A-13, 14
PERIODIC TESTING CERTIFICATE.....	A-15, 16
BREATH TEST LOG.....	A-17
MAINTENANCE AND USE LOG GUIDELINES.....	A-18
UNIFORM FORM.....	A-19
FORM A, ENGLISH.....	A-20
FORM A, SPANISH.....	A-21
FORM B, PAGE 1.....	A-22
FORM B, PAGE 2.....	A-23
FORM C, PAGE 1.....	A-24
FORM C, PAGE 2.....	A-25
FORM D.....	A-26
FORM E.....	A-27
FORM F.....	A-28
FORM G.....	A-29

CALIBRATION RECORD.....	A-30
SIMULTOR SOLUTION STUDY.....	A-31, 32, 33
SERUM ALCOHOL	A-34, 35, 36, 37, 38, 39, 40 ,41
60 DAY EXTENSION LETTER.....	A-42
OFFICER IN CHARGE.....	A-43
GUIDLINES FOR DRAWING BLOOD.....	A-44
INTOXILYZER 5000 OPERATIONAL PROCEDURE CHECKLIST	A-45
INTOXILYZER 5000 WITH KEYBOARD OPC.....	A-46-A
SMITH & WESSON 2000 OPERATIONAL PROCEDURE CHECKLIST.....	A-47
BAC VERIFIER OPERATIONAL PROCEDURE CHECKLIST.....	A-48
DATAMASTER OPERATIONAL PROCEDURE CHECKLIST.....	A-49
DATAMASTER WITH KEYBOARD OPC.....	A-50
SIMULATOR SOLUTION.....	A-51



The Commonwealth of Massachusetts Massachusetts Criminal Justice Training Center at Tewksbury



WILLIAM F. WELD
Governor

THOMAS C. RAPONE
Secretary of Public Safety

DONALD N. MAI
Chairman

WILLIAM D. BAKER
Executive Director

Post Office Box 479, Tewksbury, MA 01876
(508) 851-8272 or (617) 727-3945

June 8, 1994

Chief Christ J. Bouras
Danvers Police Dept.
120 Ash St.
Danvers, MA 01923

Dear Chief Bouras:

Pursuant to 501 CMR 2.22, the following is a list of officer(s) from your department that successfully completed Infrared Breath Test Certification and are hereby certified to perform Infrared Breath Tests in the Commonwealth.

OFFICER	CERTIFICATION DATE	EXPIRATION DATE
Dana K. Martin	8/19/93	8/19/96

This Certification is valid until the expiration date above, provided the certification is not sooner revoked by the Secretary of Public Safety in accordance with 501 CMR 2.22. Please keep this on file for proof of certification as you will not receive individual certification for the above-listed officers.

A TRUE COPY ATTEST

Very Truly Yours,

Anthony Camillo
Records Officer

William D. Baker
Executive Director



The Commonwealth of Massachusetts
Massachusetts Criminal Justice Training Center
at Tewksbury



WILLIAM F. WELD
Governor

THOMAS C. RAPONE
Secretary of Public Safety

DONALD N. MAIA
Chairman

WILLIAM D. BAKER
Executive Director

Post Office Box 479, Tewksbury, MA 01876
(508) 851-8272 or (617) 727-3945

April 8, 1994

Chief Christ J. Bouras
Danvers Police Department
120 Ash Street
Danvers, MA 01923

Dear Chief Bouras:

Pursuant to 501 CMR 2.22, the following is a list of officer(s) from your department that successfully completed infrared breath test recertification and are hereby certified to perform infrared breath tests in the Commonwealth:

OFFICER	RECERTIFICATION DATE	EXPIRATION DATE
---------	----------------------	-----------------

John P. Ambrose 1/12/94 1/12/97

This certification is valid until the expiration date above, provided the certification is not sooner revoked by the Secretary of Public Safety in accordance with 501 CMR 2.25. Please keep this on file for proof of certification as you will not receive individual certification for the above-listed officers.

TRUE COPY ATTEST

Anthony Camillo
Anthony Camillo
Records Officer

Very Truly Yours,

William D. Baker
William D. Baker
Executive Director

CMI INC
INTOXILYZEP - ALCOHOL ANALYZER
MA MODEL 5400 SN 64-000450
61/16/94

OFFICE OF ALCOHOL TESTING
OPERATIONAL PROCEDURE CHECKLIST
INTOXILYZER 5000

DEFENDANT JOHN J. DOE.

LIC. NO./DOB 011 11 1111 12/22/65

ADDRESS MAIN ST APT # 4A

FRAMINGHAM, MA. 01701

BREATH TEST OPERATOR TPR. R. K. SOOJIAN

ARRESTING OFFICER TPR. R. K. SOOJIAN

TIME FIRST OBSERVED 1303 HOURS

TIME OF TEST 1330 HOURS

DATE OF TEST 01/10/94

SIMULATOR SERIAL NO. 023661

SIMULATOR SOLUTION LOT NO. 1234

1. PUSH BUTTON TO START TEST.
2. INSERT TICKET.
3. BLOW INTO MOUTHPIECE TILL THE TONE STOPS.
HAVE SUBJECT BLOW FOR SIX TO EIGHT SECONDS.
4. SIMULATOR TEST RUN BY MACHINE.
5. BLOW INTO MOUTHPIECE TILL THE TONE STOPS.
HAVE SUBJECT BLOW FOR SIX TO EIGHT SECONDS.
6. WHEN PRINTER STOPS, REMOVE TICKET.

TEST	%BAC	TIME
AIR BLANK	.00	13:34
SUBJECT TEST	.00	13:34
AIR BLANK	.00	13:34
CAL. CHECK	.15	13:35
AIR BLANK	.00	13:35
SUBJECT TEST	.00	13:36
AIR BLANK	.00	13:36

John J. Doe
1303 hrs 6xR
TPR. Robert K. SooJian
OPTIONAL INFORMATION FOR RECORD PURPOSES

ADVISE THE DEFENDANT TO THEIR RIGHT TO A COMPARISON BLOOD TEST
AT THEIR OWN EXPENSE. RESULTS OF BLOOD TEST CAN BE USED TO
RESTORE LICENSE.

ATTACH TEST TICKET TO THIS SHEET.
REVISED 8/19/88.

Massachusetts Criminal Justice Training Council

This is to certify that

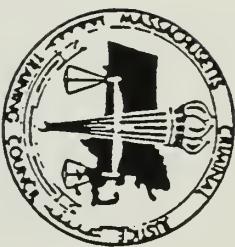
JOHN DOE

Has successfully qualified as a

INFRARED BREATH TEST OPERATOR

Presented on the 14th day of OCTOBER, 1994

This Certificate is valid for three years from the date appearing above.





Massachusetts Criminal Justice Training Council

This is to certify that

JOHN DOE

Has successfully requalified as a

INFRARED BREATH TEST OPERATOR

Presented on the 14th day of OCTOBER, 1994

This certificate is valid for three years from the date appearing above.

William Barker^⑥
Executive Director



The Commonwealth of Massachusetts Department of State Police

WILLIAM F. WELD
GOVERNOR

KATHLEEN M. O'TOOLE
SECRETARY

ONEL CHARLES F. HENDERSON
SUPERINTENDENT

OFFICE OF ALCOHOL TESTING
470 Worcester Road
Framingham, MA 01701

APPROVED INFRARED BREATH TESTING INSTRUMENTS

The following infrared breath testing instruments are approved by the Office of Alcohol Testing in accordance with 501 CMR 2.38 for use in conducting evidentiary breath tests in the Commonwealth.

COMPANY

INSTRUMENT

CMI/MPH
a subsidiary of MPD, Inc.
316 East Ninth Street
Owensboro, KY 42301
(502) 685-6545

Intoxilyzer 5000,
Model 64 and 66

Intoximeter, Inc.
1901 Locust Street
St. Louis, MO 61303
(314) 241-1158

Intoximeter 3000

National Draeger, Inc.
P.O. Box 120
101 Technology Drive
Pittsburgh, PA 15320
(412) 787-8383

Smith & Wesson Breathalyzer
2000

National Patent Analytical
Systems, Inc.
2451 Ashland Road
Mansfield, OH 44905
(419) 589-8378

BAC Verifier
DataMaster

Rev. 1/03/94 NJB



The Commonwealth of Massachusetts Department of State Police

WILLIAM F. WELD
GOVERNOR

KATHLEEN M. O'TOOLE
SECRETARY

COLONEL CHARLES F. HENDERSON
SUPERINTENDENT

APPROVED SIMULATORS

The following is a list of simulators that are approved for use in the Commonwealth in accordance with 501 C.M.R. 2.38.

SIMULATOR MODEL

Draeger Mark IIA
Smith & Wesson Mark IIA
Smith & Wesson Mark II

COMPANY

National Draeger, Inc.
P.O. Box 120
101 Technology Drive
Pittsburgh, PA 15320
(412)787-8383

Guth 34 C
Guth 10-4

Guth Laboratories
Harrisburg, PA 17111
(717)564-5470

Toxitest
Toxitest II

CMI MPH
a subsidiary of MPD, Inc.
316 East Ninth Street
Owensboro, KY 42301
(502)685-6545

Luckey
Protection Device

U.S. Alcohol Testing
of America, Inc.
17 Arcadian Avenue
Paramus, NJ 07652
(201)843-2474

3/1/94

General Malfunctions

In the event of a general malfunction (e.g., the display gives erratic information), take the following action(s):

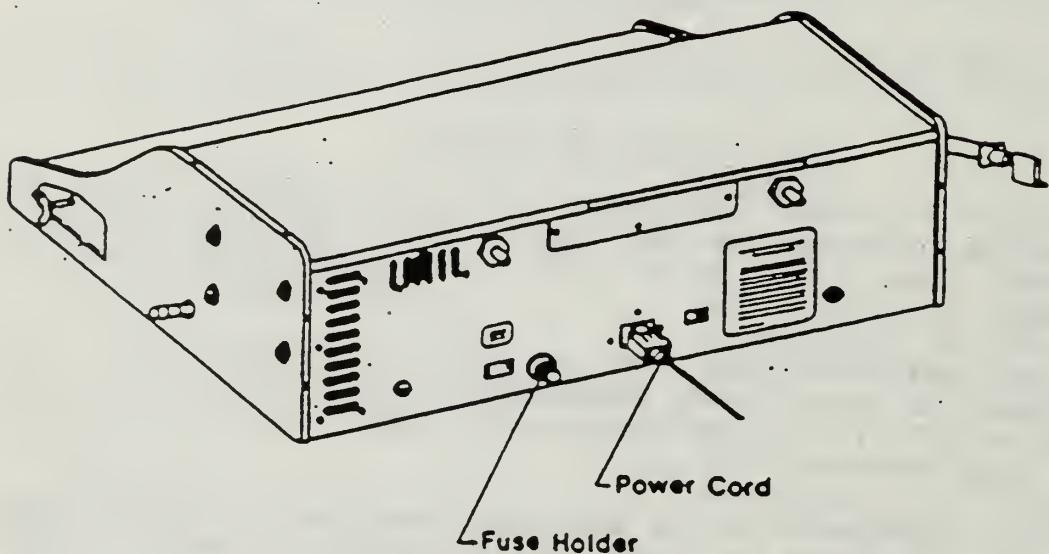
1. Push the Start Test button.
2. If pushing "Start Test" fails to correct the malfunction, trip the Computer Reset switch on the back of the instrument to return the instrument to "NOT READY". See "NOT READY" and the "Diagnostic Checks" at the beginning of this section: "Malfunctions and Displayed Error Messages".
3. If the instrument completes the diagnostic checks without displaying error message and the malfunction continues, turn the instrument "off" and consult a repair technician.

Preventative Maintenance

1. To assure adequate clearance and ventilation, locate the instrument at least one inch from a back wall and on a hard surface; i.e., not on a surface covered with a rug-like material.
2. Keep the instrument away from extremes of temperature. The instrument's operational temperature range is 68° F to 86° F (20° C to 30° C); storage temperature range is -20° F to 140° F (-29° C to 60° C).
3. Keep the instrument clean and away from dust; any good glass cleaner can be used to clean the instrument's outer surface. You can purchase an optional dustcover by ordering Part Number 011110. Power to the instrument should be "off", however, while the instrument is covered.
4. To prevent unnecessary wear of the instrument's mechanical parts, turn the instrument "off" when not in use for long periods of time.
5. Do not place heavy objects on top of instrument.
6. Every five years, a qualified service technician should replace the clock battery on the CPU board.

Service

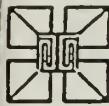
The only user-serviceable parts of the Intoxilyzer® 5000 instrument are the fuse and the power cord.



To change the fuse, unplug the power cord, unscrew the fuse holder, and replace the fuse inside with Part Number 140037: 3 amp Littlefuse 312 003.

Replace the Power Cord with Part Number 330196: Corcom 80-1245 Power Cord.

If you experience continued difficulty in preparing the Intoxilyzer 5000 instrument for use; do not operate the instrument until it has been inspected by a qualified service technician. To determine the appropriate course of action for specific problems, contact the CMI MPH Service Department at 1-800-835-0690.



National Patent Analytical Systems, Inc.

November 16, 1991

Ms. Nancy Burns, Director
Office of Alcohol Testing
Department of Public Safety
Metro-Boston Complex
1155 Central Avenue
Needham, Massachusetts 02192

Dear Ms. Burns:

This letter is to clarify a question that you have asked concerning maintenance on the B.A.C. Verifier.

The original manufacturer of the B.A.C. Verifier had no recommended time interval for routine maintenance on the instrument. This decision was left open to the final user. National Patent Analytical Systems, Inc. feels that this decision concerning service is logical based on instrument design.

I hope that this will clarify any questions concerning maintenance intervals. John and I are looking forward to seeing you on the afternoon of November 26th.

Best Regards,

A handwritten signature in black ink that reads "Cliff Broeder".

Cliff Broeder

VP Sales



National Patent Analytical Systems, Inc.

Nancy Burns, Director
Office of Alcohol Testing
1155 Central Ave
Needham, MA 02192

May 13, 1992

Dear Ms Burns:

It has come to our attention that an issue had been raised relative to the fact that we, the manufacturers of the DataMaster, have no written policy in regards to its maintenance and care. We are of the opinion that the end user will use prudent judgement as to where to place and how to maintain our instrument. We believe that the frequency of maintenance is the responsibility of the user based on "as needed" rather than "as required".

In the case of Massachusetts, we are in agreement with 501 CMR 2.54 which states "...a certified breath testing device and simulator shall be stored and maintained...in such a manner as to be free from dust, moisture, substances or forces that may affect its accurate operation."

Sincerely yours,

A handwritten signature in cursive ink that appears to read "Clifford F. Broeder".

Clifford F. Broeder
Vice President of Sales

BREATHALYZER® MAINTENANCE MANUAL

MODEL 2000

PREFACE

This manual is designed to familiarize the reader with the basic nomenclature, operating procedures, and recommended maintenance for the Breathalyzer® Model 2000. The Model 2000, utilizing the infra-red absorption principle, quantitatively establishes the presence of ethanol in a breath sample within the performance criteria set forth by the U.S. Department of Transportation for evidential breath testers (EBT).

The overall objective of a well rounded maintenance program is to assure ongoing instrument performance consistent with specifications set forth by Smith & Wesson as well as the achievement of goals established by the state breath-testing program. The extent and nature of required maintenance on the Breathalyzer® Model 2000 is largely determined by the degree of instrument usage and the environment in which the instrument is utilized. Specific regulations regarding periodic instrument review and/or preventive maintenance procedures are, therefore, left to the discretion of the state program. The following guidelines are suggested by the manufacturer.

Periodic Instrument Review

Smith & Wesson recommends,* in the absence of actual failure, each instrument be evaluated at approximately 90 day intervals. This evaluation should employ the use of a properly operating simulator and certified alcohol standards. See section _____ for complete details regarding Smith & Wesson's suggested instrument review procedure.



The Commonwealth of Massachusetts
Department of State Police
Office of Alcohol Testing
470 Worcester Road
Framingham, Massachusetts 01701
(508) 820-2646

WILLIAM F. WELD
GOVERNOR

THOMAS C. RAPONE
SECRETARY

RULES F. HENDERSON
COLONEL

MAY 17, 1993

TO: BERKLEY POLICE DEPARTMENT

The following breath testing device and/or simulator has been tested by the Office of Alcohol Testing in accordance with 501 C.M.R. 2.39 and is hereby certified for use in performing breath tests in the Commonwealth:

INSTRUMENT MODEL: INTOXILYZER 5000

SERIAL NO.: 64-001835

SIMULATOR MODEL: LUCKEY

SERIAL NO.: 01241282

This certificate is valid from MAY 10, 1993 until MAY 10, 1994 provided that your department complies with the periodic testing program developed and administered by the Office of Alcohol Testing and the certification is not sooner revoked by the Secretary in accordance with 501 C.M.R. 2.42.

NJB/jv

Nancy J. Burns
Nancy J. Burns
Director

I, Nancy J. Burns, hereby certify that I am the custodian of the records attached and that these documents are true and complete certification records of the BERKLEY POLICE DEPARTMENT'S INSTRUMENT AND SIMULATOR. I further state that these records are kept in the normal course of business; that these records are kept in good faith; it is the regular course of the Office of Alcohol Testing to make these records; that these records were made prior to the beginning of any proceeding, civil or criminal. Signed this day under the pains and penalties of perjury.

Nancy J. Burns

Nancy J. Burns
Director
Office of Alcohol Testing
MAY 17, 1993

NJB/jv



The Commonwealth of Massachusetts

Department of State Police

Office of Alcohol Testing

470 Worcester Road

Framingham, Massachusetts 01701

(508) 820-2646

WILLIAM F. WELD
GOVERNOR

THOMAS C. RAPONE
SECRETARY

CHARLES F. HENDERSON
COLONEL

October 21, 1993

TO: PALMER POLICE DEPARTMENT

The maintenance and use log of INSTRUMENT NO. 64-000408 owned by the above department has been reviewed by the Director of the Office of Alcohol Testing in accordance with 501 CMR 2.41 (6) for compliance with 501 CMR 2.41 (1), (2), (3) and (4). The instrument is in compliance as of OCTOBER 1, 1993. This certificate remains valid for six months. The next scheduled review of the records is on APRIL 1, 1994.

A handwritten signature in cursive ink that appears to read "Nancy J. Burns".

Nancy J. Burns
DIRECTOR

I, Nancy J. Burns, hereby certify that I am the custodian of the records attached and that these documents are true and complete Certification records of the PALMER POLICE DEPARTMENT'S MAINTENANCE AND USE LOG for INSTRUMENT NO. 64-000408. I further state that these records are kept in the normal course of business; that these records are kept in good faith; that it is the regular course of the Office of Alcohol Testing to make these records; that these records were made prior to the beginning of any proceeding, civil or criminal. Signed this day under the pains and penalties of perjury.

Nancy J. Burns

Nancy J. Burns
Director
Office of Alcohol Testing
OCTOBER 21, 1993

OFFICE OF ALCOHOL TESTING

BREATH TEST LOG

LOCATION _____



WILLIAM F. WELD
GOVERNOR

KATHLEEN M. O'TOOLE
SECRETARY

LONEL CHARLES F. HENDERSON
SUPERINTENDENT

The Commonwealth of Massachusetts Department of State Police

MAINTENANCE AND USE LOG GUIDELINES

The breath test log shall be placed by the infrared breath testing instrument at all times. Completed pages from each section of the log may be removed by the officer in charge and placed in a secure area. Pages to this log are to be kept for a minimum of two years and shall be available to the Office of Alcohol Testing at all times.

SECTION 1. BREATH TEST LOG

1. All evidentiary tests must be entered in the breath test log.
2. All entries are to be made by the officer administering the test.
3. Instrument serial numbers are printed on the breath test ticket.

SECTION 2. MAINTENANCE AND REPAIR LOG

1. All service to the instrument(s) should be noted in the maintenance and use log. Please have the log available so service technicians can make the appropriate entries.

SECTION 3. CALIBRATION RECORD LOG

1. Each time the simulator solution is changed a calibration record must be completed.
2. The simulator solution must be tested five times and the corresponding results noted on the calibration record.
3. Solution lot number can be found on the bottle of simulator solution.
4. Attach tickets to the calibration record.

Revised 06/02/88

A-18

A CJIB ADMINISTRATIVE MESSAGE FOR DATA 121592Z NOV 2001
FROM L3AA01 MASON 2065

TXR
FROM: SF ACADEMY
TO: OFFICE OF ALCOHOL TESTING
RE: HOL CHAPTER 90, S.EAK UNIFORM FORM BREATH TEST REPORT
BT
TEST: S&W BAC: 5000, X 4011, OTHERS: INST SER #: 66-00345
CASE/NAME: SMITH, JOHN P
DRIVER: & DOB: 021359
DATE OF ARREST: 121592
DATE OF TEST: 121592
ACCIDENT: N SINGLE, H MULT, H PED: N FATAL: H
BT OPERATOR: TFR JFJ JAKOBOWSKI ARRESTING DEPT: SF ACADEMY
REMARKS: TEST TEST TEST
AUTHORITY: JFJ
OPERATOR: JFJ
DAT 11059736
BAC X: .17/.15/.17
TIME OF ARREST: 0100
TIME OF TEST: 0130
LORTH, 1234

CJIB 32065 19 12/15/92 1000 96423/1423
TRP DATE 121592 EAT 1000 DIA = L3AA01
ADM COMPLETED MSG-ID = 2065

ON LEAPS TERMINAL, TYPE IN TASK: AM BT - XMIT

Statutory Rights and Consent Form

Form
A

Case No.: _____

Date: _____

Commonwealth v. _____

Time: _____

Rights to a Doctor

General Laws, Ch. 263, Sec. 5A, as amended: A person held in custody at a police station or other place of detention, charged with operating a motor vehicle while under the influence of intoxicating liquor, shall have the right, at his request and at his expense, to be examined immediately by a physician selected by him. The police official in charge of such station or place of detention, or his designee, shall inform him of such right immediately upon being booked, and shall afford him a reasonable opportunity to exercise it. Such person shall, immediately upon being booked, be given a copy of this section unless such a copy is posted in the police station or other place of detention in a conspicuous place to which such person has access.

Rights to a Telephone

Ch. 276, Sec. 33A as amended: The police official in charge of the station or other place having a telephone wherein the person is held in custody, shall permit the use of the telephone at the expense of the arrested person, for allowing the arrested person to communicate with his family or friends, or arrange for release on bail, or engage the services of an attorney. Any such person shall be informed forthwith upon his arrival at such station or place of detention, of his right to use the telephone, and such use shall be permitted within one hour thereafter.

Opportunity to Submit to a Chemical Test

Ch. 90, Sec. 24 as amended: I am going to offer you the opportunity to submit to a chemical test to determine your blood alcohol concentration. If you refuse this test, your license or right to operate in the Commonwealth of Massachusetts shall be suspended for at least a period of 120 days, but not more than one year for such refusal. Operators under 21 years of age will incur an additional 180-day suspension under M.G.L. Ch. 90, Sec. 24P. If you decide to take the test and complete the test, you have the right to a comparison blood test within a reasonable period of time at your own expense. The results of this comparison can be used to restore your license or right to operate at a court hearing. Such a hearing request must be made within 10 days.

Additional Notice to Persons Operating a Vehicle Requiring a Commercial Driver's License

In addition to the penalties already mentioned, Sec. 24, Ch. 90F, Sec. 11 provides that a person operating a motor vehicle for which a commercial driver's license is required, who fails to submit to a required test of blood, breath, or urine after a law enforcement officer has probable cause to believe that the person was operating any such vehicle while having alcohol in his or her system, shall be placed out-of-service for twenty-four (24) hours, and shall also be disqualified from driving a commercial motor vehicle for a period of one (1) year. If the person has on a previous occasion been convicted of a disqualifying offense as described in federal CDL regulations, the CDL disqualification shall be for life.

Do you consent to submit to a chemical test (breath/blood) to determine your blood alcohol concentration?

Yes

No

Subject: _____

Witnessed by: _____

Police official or designee in charge of station



Statutory Rights and Consent Form

FORMULARIO DE DERECHOS Y CONSENTIMIENTO ESTABLECIDO POR LA LEY

CASO NO..... FECHA.....

Commonwealth..... Hora.....

FORMULARIO DE DERECHO Y CONSENTIMIENTO ESTABLECIDO POR LAS LEYES

Reforma del Artículo 263, Capítulo 5A, de la Ley General: Toda persona que se encuentre detenida en una Estación Policial ó otro lugar con cargos de conducir vehículo motorizado bajo influencia alcohólica tiene derecho y bajo sus propios medios económicos a solicitar servicios de un Médico de su elección para ser examinado. El oficial encargado de la Estación Policial ó el centro de detención está obligado a proveer esta información al momento en que el detenido/a va a ser registrado bajo custodia policial, otorgando así la oportunidad, al detenido/a de ejercer sus derechos.

DERECHOS A UNA LLAMADA TELEFONICA

Reforma del Artículo 276 Capítulo 33: En la Estación de Policía ó otro lugar donde se encuentre una persona detenida, el oficial de servicio proporcionará a esta persona la oportunidad de hacer una llamada telefónica, la misma que será de cuenta y riesgo del detenido/a, este derecho le permite comunicarse con sus familiares ó amigos con el fin de tramitar su salida bajo fianza, ó, solicitar los servicios profesionales de un abogado. El detenido/a será informado de este derecho a su arrivo a la Estación Policial ó al lugar de detención, de hacer uso del teléfono dentro de la primera hora de su detención.

OPORTUNIDAD DE SOMETERSE A UN ANALISIS QUIMICO

Reforma del Artículo 60, Capítulo 24: Te ofrece la oportunidad de someterte a un análisis químico para determinar el grado de concentración alcohólica en la sangre. Si te negaras a éste análisis, tú Licencia ó derecho de conducir en la Ciudad de Massachusetts será suspendida por un período de 120 días, pero no mayor de un año. Los conductores menores de 21 años de edad tendrán una pena adicional de 180 días bajo las Leyes Generales de la Ciudad de Massachusetts Artículo 90; Capítulo 24P. Si decides someterte a éste análisis tienes el derecho a comparar el resultado del análisis de sangre en un período razonable de tiempo y a tu propio costo. El resultado de esta comparación puede ser usado para recuperar tu licencia ó el derecho a una audiencia en la Corte. La solicitud para una audiencia debe hacerse dentro de una término de 10 días.

INFORMACION ADICIONAL A PERSONAS QUE CONDUCEN VEHICULOS QUE REQUIEREN LICENCIA COMERCIAL

Adicional a las sanciones arriba mencionadas: el Artículo 24. Capítulo 90F Sección 11 indica: que la persona que conduce un vehículo en el que requiere de licencia comercial para conducir y se niega a someterse a este análisis de sangre, aliento ó orina, requeridos por la ley, y, teniendo las autoridades, razones para sospechar que el chofer se encuentra bajo influencia alcohólica, éste sera puesto fuera del servicio por un término de 24 horas, y será suspendido para conducir vehículos comerciales motorizados for un período de un año. En caso de que el transporte, sea de material de riesgo que requiera anuncios especiales ó señales de peligro, la Licencia Comercial de Conducir será revocada por 3 años. Y, si la persona tiene previos antecedentes ó ha sido convicto la descalificación descrita en las Regulaciones Federales de Licencia Comercial de Conducir sera de por vida.

Consientes someterse a análisis químico de (aliento/sangre) para determinar el grado de concentración alcohólica en tu organismo?

Sí

No

Acusado _____

Testigo: _____
Policía ó oficial a cargo de la Estación Policial.



Notice of Suspension/Temporary Driver's License Chemical Test Refusal

Form

B

(page 1 of 2)

Fax Form B (pages 1 & 2) IMMEDIATELY to the Registry of Motor Vehicles @ (617) 351-9276.
Operator to be given original in ALL cases, department to retain copy.

Operator: _____ Date of Birth: _____

Address: _____ City/Town: _____ State: _____

S.S. # _____ Height: _____ Weight: _____ Eye Color: _____ Sex: _____

License Number: _____ Class: _____ Issuing State: _____ Expiration: _____

Issuance of Temporary Driver's License and Notice of Suspension

License Class: A B C D M Permit (Class: _____)

Issue Date: _____ Time of Issuance: _____ Restrictions: _____ Endorsements: _____

This Temporary Driver's License is issued in lieu of a photo license under M.G.L. Ch. 90, Sec. 24. It is not valid until twelve hours after the above date and time of issue. It will expire at the end of the fifteenth (15) day after the date of issuance.

Issuance of this document does not provide any driving privileges if your license or right to operate is currently suspended, revoked, or expired, and does not negate any suspension, revocation or expiration that is to take effect during the period of this temporary license. No duplicates will be issued should this license be lost or misplaced.

No Temporary License Is Being Issued: This form is issued to the operator as a Notice of Suspension only, and confers no driving privileges. Operator is to receive original of this notice.

Reason for No Temporary License: No license in driver's possession Revoked/suspended
 Expired Out-of-state/foreign Forged/alteration Operating on a temporary license

Note to Police: By issuing this document, the officer below hereby certifies that he/she has served the operator with the original of this notice (Form B, page 1) and will send the documents, via FAX, to the Registry of Motor Vehicles.

Officer's Name (Legibly Printed): _____ Date: _____

Issuing Police Department: _____ Phone: _____

Notice of Suspension

This is your formal notice of the intent to suspend your license or right to operate under M.G.L. Ch. 90, Sec. 24 (1)(f)(i). The suspension for this refusal will be for a period of not less than 120 days and not more than one year. Operators under 21 years of age will incur an additional 180-day suspension under M.G.L. Ch. 90, Sec. 24P.

You must present this license at the Registry of Motor Vehicles if you request a hearing on the suspension. No hearing will be granted without this document.

The suspension will occur automatically at the end of the fifteenth (15) day after issuance of this document. No hardship licenses are authorized by law during the period of suspension.

Operator's Rights To a Hearing

M.G.L. Ch. 90, Sec. 24 (1)(g) reads, in part: "Any person whose license, permit, or right to operate has been suspended under subparagraph (1) of paragraph (f) shall, within fifteen days of suspension, be entitled to a hearing before the registrar which shall be limited to the following issues: (i) did the police officer have reasonable grounds to believe that such person had been operating a motor vehicle while under the influence of intoxicating liquor upon any way or in any place to which the members of the public have a right of access or upon any way to which members of the public have a right of access as invitees or licensees, (ii) was such person placed under arrest, and (iii) did such person refuse to submit to such test or analysis."

Time, Date, and Place of Hearing

You have the opportunity for such a hearing at 9:00 a.m. on any Saturday within a thirty (30) day period following the issuance date of this notice of suspension. Hearings will not be rescheduled, nor will hearings be held upon any other time or day. You must appear, with this form, and any witnesses, documents, or other evidence you wish to present, at the Registry of Motor Vehicles, 100 Nashua St., Boston. No hardship licenses are authorized by law during this period of suspension.

**Report of Refusal to Submit to Chemical Test
Under M.G.L. Ch. 90, Sec. 24 (1)(f)(1)**

Form

(page 2 of 2)

Fax Form B (pages 1 & 2) IMMEDIATELY to the Registry of Motor Vehicles @ (617) 351-9276.
Note: Complete all names before faxing.

Operator: _____ Date of Birth: _____ Sex: _____
Address: _____ City/Town _____ State _____
S.S. #: _____ License #: _____ Issuing State: _____ Expiration: _____

Was the operator arrested on a charge of operating a motor vehicle while under the influence of intoxicating liquor upon a way or in a place to which the public has a right of access as invitees or licensees in violation of Section 24 of Chapter 90 of the General Laws?

Yes No

Date of Arrest: _____ Location: _____
(Street) _____ (City or Town) _____

Arresting Officer (Print Neatly): _____ Dept. _____

State reasonable grounds as to belief that the operator committed said violation

1. State operator's driving behavior and details of pursuit (if any) and apprehension (in detail):

2. Static symptoms of intoxication (in detail):

The operator was offered a chemical test or analysis of his breath, but said operator refused to submit to said test or analysis, after having been informed that his license, permit or right to operate a motor vehicle in the commonwealth would be suspended for a period of not less than 120 days and not more than 1½ years for said refusal, in the presence of the below named and another person witnessing such a refusal.

At: _____ (Place of Refusal) _____ (Date of Refusal) _____ (Time of Refusal)

Commonwealth of Massachusetts, County of _____, SS. under the pains and penalties of perjury this
day of _____, 19_____.:

Note: Complete all names below before faxing

Name of officer before whom such a refusal was made (*please print*): _____

Name of other person witnessing such refusal (please print): _____

Note to Police: The section below is applicable only when you are unable to serve the operator with the notice of suspension. In those cases, the court may suspend under M.G.L. Ch. 90, Sec. 24 N.

Court Suspension of License

I find that the prosecution has made prima facie showing required by G.L. Ch. 90, S. 24N and therefore ORDER that the defendant's license/right to operate be suspended for a period of not less than 120 days and not more than one year (or 1½ years for defendants under age 21 at the time of arrest) for such refusal. I also have directed the prosecuting officer to FAX this document to the Registry of Motor Vehicles at (617) 351-9276 no later than the close of this business day, as required by G.L. Ch. 90, S. 24N.

A TRUE COPY ATTEST:

(Justices)

(Date)

(Time) (Court) (Clerk/Magistrate)

C
(page 1 of 2)

Notice of Suspension/Temporary Driver's License

BAC .08 or Greater (.02 or Greater for Driver Under 21)

**Fax Form C (pages 1 & 2) IMMEDIATELY to the Registry of Motor Vehicles @ (617) 351-9276.
Operator to be given original in ALL cases, department to retain copy.**

Operator: _____ Date of Birth: _____

Address: _____ City/Town: _____ State: _____

S.S. # _____ Height: _____ Weight: _____ Eye Color: _____ Sex: _____

License Number: _____ Class: _____ Issuing State: _____ Expiration: _____

If driver is under 21, is driver being charged with an OUI offense? Yes No

Issuance of Temporary Driver's License and Notice of Suspension

License Class: A B C D M Permit (Class: _____)

Issue Date: _____ Time of Issuance: _____ Restrictions: _____ Endorsements: _____

This Temporary Driver's License is issued in lieu of a photo license under M.G.L. Ch. 90, Sec. 24. It is not valid until twelve hours after the above date and time of issue. It will expire at the end of the fifteenth (15) day after the date of issuance.

Issuance of this document does not provide any driving privileges if your license or right to operate is currently suspended, revoked, or expired, and does not negate any suspension, revocation or expiration that is to take effect during the period of this temporary license. No duplicates will be issued should this license be lost or misplaced.

No Temporary License Is Being Issued: This form is issued to the operator as a Notice of Suspension only, and confers no driving privileges. Operator is to receive original of this notice.

Reason for No Temporary License: No license in driver's possession Revoked/suspended
 Expired Out-of-state/foreign Forged/alterred Operating on a temporary license

Note to Police: By issuing this document, the officer below hereby certifies that he/she has served the operator with the original of this notice (Form C, page 1) and will send the documents, via FAX, to the Registry of Motor Vehicles.

Officer's Name (Legibly Printed): _____ Date: _____

Issuing Police Department: _____ Phone: _____

Notice of Suspension

This is your formal notice of the intent to suspend your license or right to operate under M.G.L. Ch. 90, Sec. 24 (1)(f)(2). This suspension is for 90 days. Operators under 21 years of age will incur an additional 180-day suspension under M.G.L. Ch. 90, Sec. 24P.

The suspension will occur automatically at the end of the fifteenth (15) day after issuance of this document. No hardship licenses are authorized by law during the period of suspension.

Operator's Rights To a Hearing

M.G.L. Ch. 90, Sec. 24(l)(g) reads, in part: "Any person whose license or right to operate has been suspended pursuant to subparagraph (2) of paragraph (f) on the basis of chemical analysis of his breath may within ten days of such suspension request a hearing and upon such request shall be entitled to a hearing before the court in which the underlying charges are pending, or if the individual is under the age of 21 and there are no pending charges, in the district court having jurisdiction where the arrest occurred, which hearing shall be limited to the following issue; whether a blood test administered pursuant to paragraph (c) within a reasonable period of time after such chemical analysis of his breath, shows that the percentage, by weight, of alcohol in such person's blood was less than eight one-hundredths or, relative to such person under the age of twenty-one, was less than two one-hundredths."

Prima Facie Certification
Test of Breath or Blood Under G.L. Ch. 90, Sec. 24 (1)(f)(2)

Form
C
(page 2 of 2)

Fax Form C (pages 1 & 2) IMMEDIATELY to the Registry of Motor Vehicles @ (617) 351-9276.

Operator: _____ Date of Birth: _____ Sex: _____

Address: _____ City/Town _____ State: _____

S.S. #: _____ License #: _____ Issuing State: _____ Expiration: _____

I, _____, hereby state under the pains and penalties of perjury that on _____

(Date)

(Time)

(Location)

I arrested the above defendant for operating a motor vehicle in violation of G.L.c.90, S.24, S.24G, or S.24L.

Name of Arresting Officer

Police Department

I, _____, hereby state under the pains and penalties of perjury that I administered a chemical test or analysis of (Check one):

The defendant's breath
 A sample of blood identified as that of the defendant

I am trained and certified in the administration of such tests; the test was performed in accordance with regulations and standards promulgated by the Secretary of Public Safety; the equipment used for such test was regularly serviced and maintained; I have every reason to believe that the equipment was functioning properly at the time the test was administered.

Such test was administered on: _____ at: _____
(Date) (Time)

The result of such test or analysis of the percentage, by weight, of alcohol in the defendant's blood was:

1st

Std.

2nd

Name of Certified Operator or Analyst _____

Note to Police: The section below is applicable only when you are unable to serve the operator with the notice of suspension. In those cases, the court may suspend under M.G.L Ch. 90, Sec. 24 N.

Court Suspension of License

I find that the prosecution has made the prima facie showing required by G.L. Ch. 90, S. 24N and therefore ORDER that the defendant's license/right to operate be suspended until the disposition of the offense for which the defendant is being prosecuted, but in no event for more than 90 days (or 270 for defendants under age 21 at the time of arrest). I also have directed the prosecuting officer to FAX this document to the Registry of Motor Vehicles at (617) 351-9276 no later than the close of this business day, as required by G.L. Ch. 90, S. 24N.

A TRUE COPY ATTEST:

(Justice)

(Date)

(Time) (Court) (Clerk Magistrate)

Police Notice of License Seizure

Form D

Fax Immediately to the Registry of Motor Vehicles Suspension Department @ 617 351-9276

The _____ Police Department has seized the following Massachusetts Driver's License or Permit:

Operator: _____ **Date of Birth** _____

Lic. # _____ Seized on the following date: _____

Was the license seized as the result of an OUI arrest? Yes No

Seized for the following reason (check as many as applicable):

- Breath test of .08 or more (or .02 for a driver under age 21)
- Breath test refusal
- License was suspended, revoked or expired
- License was forged or altered - Explain _____
- Other - Explain _____

Police Certification Of License Disposition

(Check one box only)

Signed: _____ ID# _____

Officer's Name (print legibly): _____

Directions: Staple the license or permit below, and photocopy. FAX the photocopy immediately to the Registry of Motor Vehicles Suspensions Department at (617) 351-9276, regardless of whether or not you intend to send the original at a later date.

Form
E

Commonwealth of Massachusetts
Commercial Drivers License
Prima Facie Certification: Test(s) of Blood, Breath, or Urine
(M.G.L C. 90F S.11)
.04 or More Concentration of Blood Alcohol

Fax Forms E and F IMMEDIATELY to the Registry of Motor Vehicles @ (617) 351-9276.

Police Dept

Defendant: _____ D.O.B.: _____ Sex: _____

Address: _____ S.S. #: _____

License Class: _____ License. # _____ State: _____ Exp.: _____

Vehicle Registration #: _____ State: _____ Exp.: _____

Location of Offense: _____ Date: _____ Time: _____
(Street and Town/City)

Placarded for Hazardous Materials? Yes No

Placed out of service for 24 hours? Yes No

(Police Officer's Signature)

(Police Officer's I.D.#)

I, _____, hereby certify under pains and penalties of perjury that: After stopping or detaining the operator of a Commercial Motor Vehicle as defined in G.L. C90F S.1, had probable cause to believe that said operator did operate or was in physical control of said vehicle while having alcohol in his/her system. I informed said operator that operation of or being in physical control of a Commercial Motor Vehicle is deemed consent to a test or tests for determination of alcohol or drugs in his/her system. The defendant did submit to such test(s).

I, _____, hereby state under the pains and penalties of perjury that: I administered a chemical test or analysis of: Blood, Breath and/or Urine

I am trained and certified in the administration of such tests; the test was performed in accordance with regulations and standards promulgated by the Secretary of Public Safety; the equipment used for such test was regularly serviced and maintained; I have every reason to believe that the equipment was functioning properly at the time the test was administered;

Such test was administered on _____ at (time): _____
(Date) _____ (Time) _____

The result of such test or analysis of the percentage, by weight, of alcohol in the defendant's blood was:

_____ / _____ / _____
1st Std 2nd

(Signature of Certified Operator or Analyst)

Date

Commonwealth of Massachusetts
Commercial Drivers License
Report of Refusal to Submit to a Test(s) of Blood, Breath, Urine

Police Dept

Fax Forms E and F IMMEDIATELY to the Registry of Motor Vehicles @ (617) 351-9276.

Operator: _____ SS#: _____

Address: _____ DOB: _____

City: _____ State: _____

Vehicle Registration #: _____ State: _____ Exp.: _____

CDL License Number: _____ State: _____

CDL License Class: _____ CDL License Expiration: _____

Date of Stop: _____ Time of Stop: _____

Location of Stop: _____ City/Town: _____

Placarded for Hazardous Materials? Yes No

Placed out of service for 24 hours? Yes No

(Officer's Signature)

(Officer's ID Number)

I, _____, requested the above named operator to take a test(s) of
 Blood, Breath Urine and said operator did refuse to take any test.

I also informed the operator that said refusal to take the test will result in a disqualification from operating a commercial motor vehicle in the Commonwealth of Massachusetts by the Registrar of Motor Vehicles for a period of one year or more. Yes No

Commercial Drivers License 24 Hour Out-of-Service Order

You are hereby ordered out of service for a period of 24 hours, and during said 24 hours you may not operate or be in physical control of a commercial motor vehicle requiring a commercial drivers license to operate.

(Issuing Department)

(Operator's Name)

(Date)

(Time of Order)

Note: Per 49 CFR 392.5 (d) (1) (2), any driver who is issued an out-of-service order under this section shall:

- 1) Report in writing such issuance to his/her employer within 24 hours, and
- 2) Report in writing such issuance to a state official, designated by the state which issued his/her drivers license, within 30 days.

OFFICE OF ALCOHOL TESTING

CALIBRATION RECORD

LOCATION STATE POLICE MIDDLEBOROOPERATOR TPR. JOHN P. JAKOBOWSKI BADGE / ID# 1897SIMULATOR SERIAL NUMBER 111222SIMULATOR SOLUTION LOT # 1234SIMULATOR SOLUTION EXPARATION DATE 7-1-92INSTRUMENT SERIAL # 66-003004

SIMULATOR TEST RESULTS:

1. .14%
2. .14%
3. .14%
4. .14%
5. .14%

"Sample"Solution ChangeOn my=
S

ATTACH TICKETS BELOW.

I-HEADQUARTERS
 INTOXILYZER - ALCOHOL ANALYZER
 IA MODEL 5000 SN 66-003004
 05/01/92

TEST	%BAC	TIME
AIR BLANK	.00	12:06
CAL. CHECK	.14	12:06
AIR BLANK	.00	12:06
CAL. CHECK	.14	12:06
AIR BLANK	.00	12:57
CAL. CHECK	.14	12:58
AIR BLANK	.00	12:58
CAL. CHECK	.14	12:59
AIR BLANK	.00	12:59
CAL. CHECK	.14	12:59
AIR BLANK	.00	13:00

Simulator 34°CJ.P. JAKOBOWSKI 1897SUSPECT NAME

A-30

Monthly Cal Test 5-1-92



The Commonwealth of Massachusetts
Department of State Police
Office of Alcohol Testing
470 Worcester Road
Framingham, Massachusetts 01701
(508) 820-2646

WILLIAM F. WELD
GOVERNOR

THOMAS C. RAPONE
SECRETARY

CARLES F. HENDERSON
COLONEL

HOW HYGROSCOPIC IS SIMULATOR SOLUTION ?

INTRODUCTION

In the Commonwealth of Massachusetts, an officer is required to run a simulator check each time a defendant is tested. In addition, the simulator is tested every time the solution is changed. At issue in the Commonwealth recently is "What really is the value of the simulator solution?" Defense experts contend the breath tests are invalid even with simulator readings of 0.14%, 0.15% or 0.16% because the simulator solution is hygroscopic. What does this mean?

Even though alcohol is hygroscopic, my research has concluded that this fact does not effect simulator solution readings to the degree that it would serve to invalidate any breath testing in the Commonwealth.

EXPERIMENTATION

APPARATUS: A certified Intoxilyzer 5000, serial number 66-002799 was used for all testing. The Intoxilyzer was last certified on October 26, 1993. The following three certified simulators were used: 1) Draeger Mark IIA, serial number 9103076-034, certified on October 26, 1993; 2) Smith & Wesson Mark IIA, serial number 202020, certified on October 26, 1993; and 3) Smith & Wesson Mark IIA, serial number M5525, certified on October 26, 1993.

SOLUTION: The simulator solution was made with USP Ethyl Alcohol, dehydrated 200 Proof; supplied by Pharmco Products, Inc., Bayonne, NJ. Pharmaceutical quality distilled water was supplied by Belmont Springs, Tewksbury, MA.

DISCUSSION

Alcohol is described as a transparent, colorless liquid that is very hygroscopic. Hygroscopic is descriptive of a substance that has the property of absorbing moisture from the air. The theory forwarded by the defense bar in this state is:

1. Alcohol is hygroscopic.
2. Because alcohol is hygroscopic it picks up water from the air.
3. Because alcohol picks up water out of the air, the simulator solution has an incorrect value.
4. Because the value of the simulator solution is incorrect; the breath test is invalid.

To determine if this theory had any validity, I undertook to prove or disprove this theory using scientific principals and experimentation.

STANDARDS AT ISSUE

In accordance with 501 CMR 2. 56, a breath test is valid if the reading on the calibration standard analysis is 0.14%, 0.15% or 0.16%, expressed in the two decimal mode, truncating by dropping any third or subsequent decimal.

The second applicable standard is 501 CMR 2.41. Each time an officer changes the simulator solution and runs five calibration tests, the test results must be 0.14%, 0.15% or 0.16% to be valid. Any third or subsequent decimals are to be truncated.

TESTING

To make the simulator solution I left the one pint glass jar the alcohol was received in, which was approximately 1/3 full of alcohol, open to the room air for 31 days. This was done in the same room that all simulator solution is manufactured for use in the Commonwealth for law enforcement officials. The bottle was left open so it could take any moisture out of the air, to show how hygroscopic the alcohol actual is. I wanted to determine if, in fact, room moisture, ie. air, has a substantial effect on the simulator solution.

After 31 days of exposure to the air; I made the simulator solution in the same manner in which I always do for use by the police. (Done on: October 29, 1993). Because I am the only chemist, and only employee of the Office of Alcohol testing, I always make the solution. I used a class A pipet and pipetted 23.85 ml of ethyl alcohol from the open bottle into 10,000 ml of water. The water was measured in a Class A volumetric flask.

The simulator solution was then placed in three different simulators and run on an Intoxilyzer 5000. Thirty five tests were run on the simulator solution. The lowest value obtained was 0.14%, the highest 0.15%. ALL 35 TEST RESULTS RESULTED IN VALID EVIDENTIARY TESTS.

CONCLUSION

Even though alcohol is hygroscopic, this fact has no significance in the Commonwealth when running evidentiary tests. When solution is made for evidentiary use, the cap is never left off the alcohol for more than one minute. All solution used in the Commonwealth still give proper evidentiary results even when manufactured with alcohol left open for 31 days.

NOTE: Copies of the thirty five test results are available upon request. (In test ticket form.)



The Commonwealth of Massachusetts Department of State Police

WILLIAM F. WELD
GOVERNOR

KATHLEEN M. O'TOOLE
SECRETARY

NEL CHARLES F. HENDERSON
SUPERINTENDENT

HOSPITAL RECORDS AND SERUM ALCOHOL

PREPARED BY: NANCY J. BURNS, DIRECTOR
THE OFFICE OF ALCOHOL TESTING

As the Director of the Office of Alcohol Testing, I receive a great number of calls on hospital records and serum alcohol. Because I am the only present employee of this office, many times I am unavailable to take your immediate calls. The information provided below should be helpful to answer many of your questions on this subject.

A. COMPOSITION OF THE BLOOD

Blood is a specialized type of connective tissue. The fluid portion of blood is the plasma. The fibrous portion of blood only appears during clotting. The cellular component of blood is comprised of red blood cells and white blood cells. Two other components are found in blood: 1) platelets, which are involved in blood clotting; and 2) chylomicrons, which are tiny fat droplets.¹

When blood is centrifuged, or spun down, it divides into fractions. The upper fraction is a clear, straw colored liquid called the plasma. The lower fraction consists of the red and white blood cells.

When the fibrinogen is removed from the plasma by clotting or some other method, the remaining liquid is called the serum.

B. CALCULATION OF BLOOD ALCOHOL FROM BREATH SAMPLES

When a person takes a breath test at a police station, the instrument measures the person's breath alcohol. The instrument

¹ See L.L. Langley, Ira R. Telford and John B. Christensen, "Dynamic Anatomy & Physiology", McGraw Hill Book Company, 1974.

then uses a conversion factor² to report the person's blood alcohol. The blood alcohol result is reported in grams of ethanol in each 100 milliliters of blood.

Many states simply express the amount of alcohol present when testing breath in terms describing the breath. The breath alcohol result would be reported in grams of ethanol in each 210 liters of breath. This designation, grams per 210 liter is equal to grams percent.

C. CALCULATION OF BLOOD ALCOHOL FROM BLOOD SAMPLES

When a person has a blood sample drawn, it can be analyzed for the presence of alcohol in several different ways. Blood analysts at the State Police Crime Laboratory use a gas chromatograph to measure the amount of ethanol present in the blood sample. The results are expressed in grams of ethanol in each 100 milliliters of blood.

The blood alcohol result from a blood analyst who tests a blood sample is equal to the blood alcohol result obtained from any breath testing instrument in the Commonwealth. Each are expressed in the same terms, grams percent. Grams percent is shorthand for grams of ethanol in each 100 milliliters of blood.

D. CALCULATION OF BLOOD ALCOHOL FROM SERUM SAMPLES

When a hospital draws a blood sample from a patient, they prepare the sample for testing by centrifuging the blood. This divides the blood into two distinct fractions, the liquid fraction and the cellular fraction.

Ethanol is found in the portion of the blood that is water. Serum is the water portion of the blood. Hospitals will test serum for the presence of alcohol.

Serum alcohol does not equal blood alcohol. Serum alcohol is always higher than blood alcohol. This is because the sample was concentrated, made smaller, by the removal of the cellular portion. This makes the test result from the serum obtained higher than the test result if the whole sample was analyzed.

It can be mathematically determined how much water is present in serum and how much water is present in blood.³ By knowing

² For a review of the scientific schools of thought on the conversion factor, or, 2100:1 ratio, see State v. Downie, 569 A.2d 242 (N.J. 1990), reprinted in this manual.

³ See "Plasma/Whole Blood Alcohol Ratio" by R.N. Harger, reprinted at end of this article.

this ratio, serum alcohol can be converted to blood alcohol.⁴ On average, serum alcohol is approximately 12% higher than the corresponding blood alcohol.

I have prepared a chart which can be used as a quick reference to convert serum alcohol to blood alcohol.⁵ To use the chart, there is one prerequisite. The chart expresses all serum results in mg/dl. Mg/dl stands for milligrams of ethanol in each 100 milliliters of blood. Most hospitals express serum alcohol in mg/dl.

To use the chart, simply locate the serum alcohol level in the left column. The corresponding blood alcohol is found in the right hand column. The blood alcohol result is expressed in grams percent.

The blood alcohol result obtained from the serum sample is equal to the blood alcohol result of: a) testing a blood sample drawn at the same time, or b) testing a breath sample taken at the same time.

E. CHANGING UNITS IN WHICH RESULTS ARE EXPRESSED

On occasion, test results may not be reported in gram percent, or in mg/dl. The following are several additional units that might be seen when examining hospital records.

1. grams/deciliter= g/dl

Grams / deciliter equals grams per 100 milliliters. The units are interchangeable. One dl, one deciliter is equal to 100 milliliters.

g/dl= g/100ml or grams percent

If the serum result is expressed in grams per deciliter, the grams must be changed to milligrams before the chart can be used. One gram equals 1000 milligrams.

2. milligrams/ 100 milliliters= mg/100ml

Milligrams per 100 milliliters equals milligram per

⁴ The calculation to change serum alcohol to blood alcohol is done in a foot note in Comm. v. Sargent, 24 Mass.App.Ct. 657 (1987).

⁵ This conversion chart was prepared in 1991. It has been published in all breath testing manuals in the Commonwealth since 1992. It is used in numerous hospitals, doctors offices and clinics as a conversion chart throughout New England.

deciliter.

$$\text{mg/100ml} = \text{mg/dl or milligrams percent}$$

If a serum result is expressed in mg per 100 milliliter, the chart can be used because 100 milliliters equals 1 deciliter or dl. No conversion is necessary.

CONCLUSION

Blood, breath, or serum can be tested to determine a person's blood alcohol level. All blood alcohol test result in the Commonwealth should be expressed in grams of ethanol in each 100 milliliters of breath, gram percent, to be consistent with the general laws of the Commonwealth.

Serum results can be converted to blood alcohol results by using the provided Serum Conversion Chart. Serum units can be changed to agree with mg/dl before the chart is used.

All blood, breath or serum test results, if preformed properly, can be used as accurate indications of the person's blood alcohol at the time the test was administered.



The Commonwealth of Massachusetts Department of State Police

WILLIAM F. WELD
GOVERNOR

KATHLEEN M. O'TOOLE
SECRETARY

COLONEL CHARLES F. HENDERSON
SUPERINTENDENT

SERUM CONVERSION CHART

You can use this conversion chart if you have a serum alcohol result on a defendant that you want to convert to a blood alcohol level as expressed in G.L. C.90 - S.24N. If the result is expressed in mg/dl look in the left hand column labled Serum Alcohol Level for result. The corresponding blood alcohol level for the average individual would be in the corresponding right hand column. This chart gives you the **average** blood alcohol and does not attempt to give you the possible high and low alcohol levels due to the water content of the defendant's blood.

SERUM ALCOHOL LEVEL	BLOOD ALCOHOL LEVEL
057-067 MG/DL	0.05%
068-078 MG/DL	0.06%
079-090 MG/DL	0.07%
091-101 MG/DL	0.08%
102-112 MG/DL	0.09%
113-124 MG/DL	0.10%
125-135 MG/DL	0.11%
136-147 MG/DL	0.12%
148-158 MG/DL	0.13%
159-169 MG/DL	0.14%
170-181 MG/DL	0.15%
182-192 MG/DL	0.16%
193-204 MG/DL	0.17%
205-215 MG/DL	0.18%
216-226 MG/DL	0.19%
227-238 MG/DL	0.20%
239-249 MG/DL	0.21%
250-261 MG/DL	0.22%
262-272 MG/DL	0.23%
273-283 MG/DL	0.24%
284-295 MG/DL	0.25%
296-306 MG/DL	0.26%
307-318 MG/DL	0.27%
319-329 MG/DL	0.28%
330-340 MG/DL	0.29%
341-352 MG/DL	0.30%

TOXICOLOGY

Mechanisms and Analytical Methods

Edited by

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VOLUME II

1961



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Ethyl Alcohol

by R. N. HARGREN

I. Pure Alcohol and Alcoholic Beverages	44
A. Properties of Ethyl Alcohol	50
B. Alcoholic Beverages	87
II. Normal Alcohol	88
III. Absorption of Alcohol	88
IV. Distribution of Absorbed Alcohol	89
A. Route	89
B. Speed in Reaching Equilibrium	89
C. Alcohol Level and Water Content	91
D. Blood Source and Alcohol Level	91
E. Total Body/Blood Alcohol Levels; Wildmark Factor γ	93
F. Plasma/Whole Blood Alcohol Ratio	94
G. Correlation of Alcohol Levels of Blood and Brain	94
H. Level of Alcohol in Blood and Other Body Fluids	96
I. Blood/Alveolar Air Alcohol Ratio	97
J. Possible Post-mortem Diffusion of Unabsorbed Alcohol	97
V. Fate of Absorbed Alcohol	98
A. Excretion	98
B. Biochemical Oxidation	100
C. Rate of Disappearance; Wildmark Factor β	101
VI. Pharmacological and Toxicological Effects	104
A. Skin	105
B. Gastrointestinal Tract	105
C. Heart and Circulation	105
D. Liver	106
E. Kidney	106
F. Central Nervous System	106
VII. Determination of Alcohol in Body Materials; General Considerations	110
A. Obtaining and Preserving Samples	110
B. Separation of Alcohol from Body Tissues and Fluids	119
C. Quantitative Procedures for Determining Ethyl Alcohol	120
D. Specificity of the Methods	125
VIII. Directions for Five Methods of Estimating Alcohol in Body Tissues and Fluids	126
A. Wildmark Desiccation Method	126
B. Desiccation Method of Sunshine and Nevard	126
C. Dichromate Titration Method of Hunger	129
D. Kozelka-Hine Dichromate Method with Alkaline Mercuric Oxide	131
Treatment of First Distillate	134

Appendix. A 150-lb. person has a blood alcohol concentration of 0.15%. Assuming $\rho = 0.07 = 0.10X$. Then, $0.10\% \times 150 = 0.15$ lb., or 2.4 avolt. oz. of alcohol in the body. Since the specific gravity of alcohol is 0.8, this would equal 3.0 fluid ounces of pure alcohol or 8 fl. oz. of 100-proof whisky. Thus, per fluid alcohol $\times 40 = \text{total body alcohol as fluid ounces of 100-proof whisky}$, 30-lb. person.

This figure represents only the unburned alcohol remaining in his body. He would have to drink more than 6 fl. oz. of 100-proof whisky to cause this blood alcohol concentration because he would destroy and excrete some of the alcohol during the period of drinking and absorption.

Plasma/Whole Blood Alcohol Ratio

According to Canturov and Schepartz (C1), whole human blood has an average specific gravity of 1.056 and contains 83% of water by weight, while the average specific gravity of plasma is 1.026 and its water content is 94%. These figures mean that 100 ml. whole blood contains 96.5 ml. water, and 100 ml. plasma contains 96.5 ml. water; on the basis of equal volumes, the water content of plasma is 10% greater than that of whole blood. Using similar data given by Bodansky (B7), one obtains an average figure of 11.0% between the water content of plasma and whole blood. Gruner (G14) reported that the plasma/whole blood alcohol ratio of 10 human subjects was practically identical with the water ratio. The average figure for this ratio, on the basis of equal weights of plasma and whole blood, is plasma/whole blood = 1.16. Since the specific gravity of whole blood is about 3% higher than that of plasma, Gruner's ratio for 100 volumes would be 1.13. On the weight basis, Elbel (E4) found n/whole blood alcohol ratios of 1.05 to 1.25, av. 1.17, for men. On a weight basis this would be 1.02-1.21, av. 1.135. For dogs, Forney *et al.* found plasma/whole blood alcohol ratios of 0.925 to 1.176, av. 1.05, on the basis of volume. In estimating the level of alcohol in whole blood analyses of plasma or serum, one should probably follow the advice of Bell and Schleyer (E5, p. 127) and divide the latter figures by 1.20 if sample was weighed, which would mean dividing by about 1.16 on the basis of volume.

Correlation of Alcohol Levels of Blood and Brain

Figure 5, from Hargett *et al.* (H14), presents blood and brain alcohol levels of 53 dogs which were sacrificed $\frac{1}{4}$ to 12 hours after receiving 0.5-ml. alcohol/kg. The blood samples were taken from the saphenous vein just before the animals were killed, instantaneously. The blood alcohol is expressed per milliliter and the brain alcohol per gram. On the

basis of equal weights of the two substances, assuming a blood specific gravity of 1.054, the average blood/brain alcohol ratio for all 53 animals is 1.11. Fifteen of the animals were killed $\frac{1}{4}$ to $\frac{1}{2}$ hour after receiving alcohol by stomach, and with these the average blood/brain ratio was somewhat low, due to the normal lag in the alcohol level of peripheral

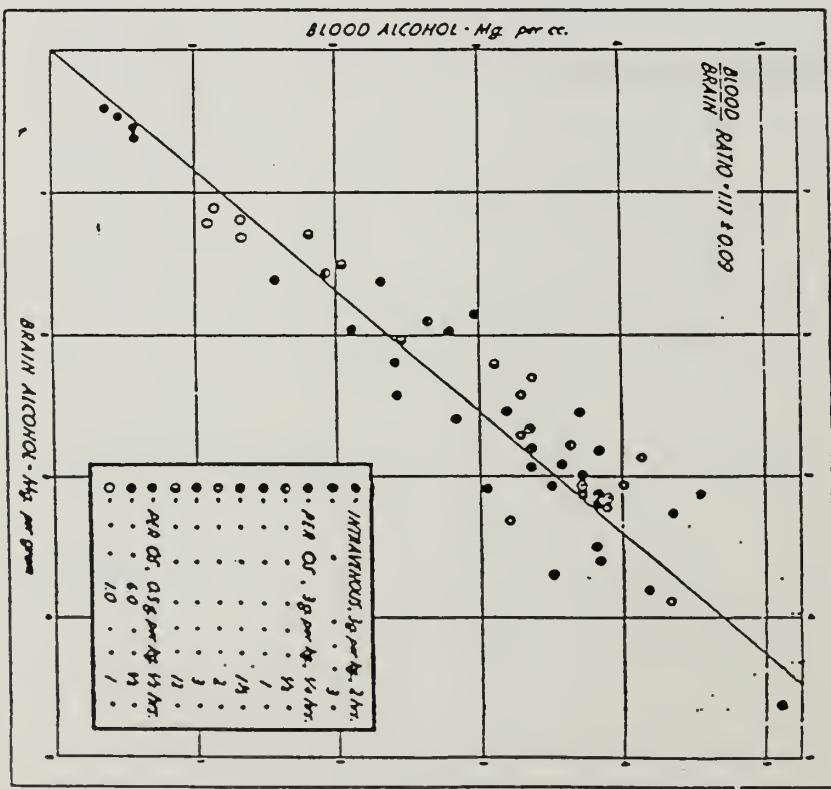


Fig. 5. Correlation between levels of alcohol in brain and blood of 53 dogs. To convert blood alcohol from mg./cc. to mg./gm. divide by 1.054. From Hanger, Hulpius, and Lamb (H14).

venous blood. With the remaining 38 dogs, most of which had reached equilibrium, the average blood/brain (wt./wt.) alcohol ratio was 1.17, with extremes of 0.83 to 1.47. Gettler *et al.* (G2, G3) have published blood-brain alcohol analyses for 30 dogs. The results from 32 of them agree well with the findings of Hanger *et al.* With the remaining 4 dogs of Gettler *et al.*, which were killed 7-45 minutes after receiving



The Commonwealth of Massachusetts
Massachusetts Criminal Justice Training Center
at Tewksbury



WILLIAM F. WELD
Governor

OMAS C. RAPONE
Secretary of Public Safety

Post Office Box 479, Tewksbury, MA 01876
(508) 851-8272 or (617) 727-3945

DONALD N. MAIA
Chairman

WILLIAM D. BAKER
Executive Director

TO: Whom It May Concern

FROM: Massachusetts Criminal Justice Training Council

DATE:

RE: Extension request

This letter is in response to your request for a sixty (60) day extension . The extension has been approved for the officers listed on the attached letter. Please be advised that the officers must be recertification on or before the extension date, as there is no further extension.

* * * *



The Commonwealth of Massachusetts Department of State Police

WILLIAM F. WELD
GOVERNOR

KATHLEEN M. O'TOOLE
SECRETARY

COLONEL CHARLES F. HENDERSON
SUPERINTENDENT

OFFICER IN CHARGE

For each certified breath testing device and simulator in the Commonwealth, there shall be maintained by a certified breath test operator designated for that purpose by the chief of police or chief executive officer, a maintenance and use log in a manual or automated format and in the manner to be prescribed for that purpose by the Office of Alcohol Testing. The name of said designated person shall be submitted in writing by the chief of police or chief executive officer of the agency or department to the Office of Alcohol Testing and any changes in this designation shall also be submitted in writing to the Office of Alcohol Testing.

501 C.M.R. 2.54 (3/28/91).

AGENCY/ DEPARTMENT _____

STREET _____

TOWN/ ZIP CODE _____

EFFECTIVE DATE _____

OFFICER IN CHARGE _____

CHIEF OF POLICE/ CHIEF EXECUTIVE OFFICER

GUIDELINES FOR DRAWING BLOOD AND SUBMITTING
BLOOD SAMPLES TO THE STATE POLICE CRIME LAB IN OUI CASES

1. Person must be under arrest for O.U.I. alcohol M.G.L. 90 s.24
2. Taken to a medical facility for treatment under C.111 s.51
3. Subject must have consented to the blood test.
*** NOTE: Medical Exceptions in the statute ***
Hemophiliac, Diabetic, or a person having a condition requiring anticoagulants shall not be deemed to have consent to a blood test.
4. If the person arrested is a medical exception, the officer should use his discretion as to either 1- Take back barracks for breath test. or 2- Have no result of blood alcohol test (Breath or Blood).
5. If the person does consent to a blood test, note the following:
 - A. The sample must be drawn by a Medical Doctor, A Registered Nurse, or a Certified Medical Technician. (M.D., R.N., C.M.T.)
 - B. Drawn at the direction and in the presence of the police officer.
 - C. Ask for 2 tubes of blood containing a powdered anticoagulant. (5-10 ml per tube). Grey, Purple, Blue or Green stoppers indicate anticoagulants. Red stoppered test tubes do not contain anticoagulants. Tell the medical person that the sample is to be tested for alcohol so the area will be sterilized with a non alcohol solution.
6. Refrigerate the sample until they can be delivered to the State Police Crime Lab to a certified analyst. Delivery will be during normal business hours Monday through Friday between the hours of 9:00 A.M. to 5:00 P.M.
7. Keep a continuity sheet on the evidence.
8. Any questions on these guidelines can be addressed to the Office Of Alcohol Testing or Trooper Jakobowski/ State Police Alcohol Enforcement Program (508)-820-2646/2661.

C:cdblood

DEPARTMENT OF STATE POLICE
OFFICE OF ALCOHOL TESTING
INTOXILYZER 5000
OPERATIONAL PROCEDURE CHECKLIST

DEFENDANT _____

LIC. NO./DOB _____

ADDRESS _____

BREATH TEST OPERATOR _____

ARRESTING OFFICER _____

TIME FIRST OBSERVED _____

DATE OF ARREST _____

SIMULATOR SERIAL NO. _____

SIMULATOR SOLUTION LOT NO. _____

1. PUSH BUTTON TO START TEST. _____
2. INSERT TICKET. _____
3. HAVE SUBJECT BLOW INTO MOUTHEPIECE FOR SIX TO EIGHT SECONDS. _____
4. SIMULATOR TEST RUN BY INSTRUMENT.
VALID RESULTS: 0.14, 0.15, 0.16 _____
5. HAVE SUBJECT BLOW INTO MOUTHPIECE FOR SIX TO EIGHT SECONDS. _____
6. WHEN PRINTER STOPS REMOVE TICKET. _____
7. ADVISE THE DEFENDANT TO THEIR RIGHT TO A COMPARISON BLOOD TEST AT THEIR OWN EXPENSE. RESULTS OF BLOOD TEST CAN BE USED TO RESTORE THEIR LICENSE. _____
8. ENTER RESULTS INTO THE BREATH TEST LOG. _____

NOTE: ATTACH TICKET TO SHEET.

REVISED 3/1/94

DEPARTMENT OF STATE POLICE
OFFICE OF ALCOHOL TESTING
INTOXILYZER 5000 WITH KEYBOARD
OPERATIONAL PROCEDURE CHECKLIST

1. PUSH BUTTON TO START TEST: _____
2. INSERT TICKET. ENTER ALL INFORMATION REQUESTED THROUGH THE KEYBOARD. _____
3. HAVE SUBJECT BLOW INTO MOUTHPIECE FOR SIX TO EIGHT SECONDS. _____
4. SIMULATOR TEST RUN BY INSTRUMENT.
VALID RESULTS: 0.14, 0.15, 0.16 _____
5. HAVE SUBJECT BLOW INTO MOUTHPIECE FOR SIX TO EIGHT SECONDS. _____
6. WHEN PRINTER STOPS REMOVE TICKET. _____
7. ADVISE THE DEFENDANT TO THEIR RIGHT TO A COMPARISON BLOOD TEST AT THEIR OWN EXPENSE. RESULTS OF BLOOD TEST CAN BE USED TO RESTORE THEIR LICENSE. _____
8. ENTER RESULTS INTO THE BREATH TEST LOG. _____

NOTE: ATTACH TICKET TO SHEET.

REVISED 3/1/94

DEPARTMENT OF STATE POLICE
OFFICE OF ALCOHOL TESTING
INTOXILYZER 5000 WITH KEYBOARD
OPERATIONAL PROCEDURE CHECKLIST

1. PUSH BUTTON TO START TEST. _____
2. INSERT TICKET. ENTER ALL INFORMATION REQUESTED THROUGH THE KEYBOARD. _____
3. HAVE SUBJECT BLOW INTO MOUTHPIECE FOR SIX TO EIGHT SECONDS. _____
4. SIMULATOR TEST RUN BY INSTRUMENT.
VALID RESULTS: 0.14, 0.15, 0.16 _____
5. HAVE SUBJECT BLOW INTO MOUTHPIECE FOR SIX TO EIGHT SECONDS. _____
6. WHEN PRINTER STOPS REMOVE TICKET. _____
7. ADVISE THE DEFENDANT TO THEIR RIGHT TO A COMPARISON BLOOD TEST AT THEIR OWN EXPENSE. RESULTS OF BLOOD TEST CAN BE USED TO RESTORE THEIR LICENSE. _____
8. ENTER RESULTS INTO THE BREATH TEST LOG. _____

NOTE: ATTACH TICKET TO SHEET.

REVISED 3/1/94
OAT APPROVED 3/1/94

DEPARTMENT OF STATE POLICE
OFFICE OF ALCOHOL TESTING
SMITH AND WESSON 2000
OPERATIONAL PROCEDURE CHECKLIST

DEFENDANT _____

LIC. NO./DOB _____

ADDRESS _____

BREATH TEST OPERATOR _____

ARRESTING OFFICER _____

TIME FIRST OBSERVED _____

DATE OF ARREST _____

SIMULATOR SERIAL NO. _____

SIMULATOR SOLUTION LOT NO. _____

1. INSERT TICKET APPEARS. INSERT TICKET. _____
2. READY APPEARS, PUSH START TEST. 8.88 APPEARS AND THE INSTRUMENT PURGES. _____
3. BLANK READ APPEARS 0.00. _____
4. BLOW SAMPLE APPEARS. HAVE SUBJECT BLOW INTO MOUTHEPIECE FOR SIX TO EIGHT SECONDS. _____
5. ANALYZING APPEARS. RESULTS RECORDED ON TICKET AND READOUT. _____
6. INSTRUMENT RECYCLES. BLOW SAMPLE APPEARS, HOOK UP SIMULATOR AND PRESS START TEST BUTTON. RESULTS ARE RECORDED.
VALID RESULTS: 0.14, 0.15, 0.16. _____
7. DISCONNECT SIMULATOR. _____
8. INSTRUMENT RECYCLES. BLOW SAMPLE APPEARS. HAVE SUBJECT BLOW INTO MOUTHPIECE FOR SIX TO EIGHT SECONDS. _____
9. AFTER ANALYZING, RESULTS ARE RECORDED. REMOVE TICKET. _____
7. ADVISE THE DEFENDANT TO THEIR RIGHT TO A COMPARISON BLOOD TEST AT THEIR OWN EXPENSE. RESULTS OF BLOOD TEST CAN BE USED TO RESTORE THEIR LICENSE. _____
8. ENTER RESULTS INTO THE BREATH TEST LOG. _____

NOTE: ATTACH TICKET TO SHEET.
REVISED 3/1/94

DEPARTMENT OF STATE POLICE
OFFICE OF ALCOHOL TESTING
BAC VERIFIER
OPERATIONAL PROCEDURE CHECKLIST

DEFENDANT _____

LIC. NO./DOB _____

ADDRESS _____

BREATH TEST OPERATOR _____

ARRESTING OFFICER _____

TIME FIRST OBSERVED _____

DATE OF ARREST _____

SIMULATOR SERIAL NO. _____

SIMULATOR SOLUTION LOT NO. _____

1. PUSH RUN BUTTON. _____
2. WHEN BLO APPEARS, HAVE SUBJECT BLOW INTO MOUTHPIECE FOR SIX TO EIGHT SECONDS. _____
3. WHEN ES APPEARS, ATTACH SIMULATOR. _____
4. WHEN PUMP STOPS, DISCONNECT SIMULATOR.
VALID RESULTS: 0.14, 0.15, 0.16. _____
5. WHEN BLO APPEARS, HAVE SUBJECT BLOW INTO MOUTHPIECE FOR SIX TO EIGHT SECONDS. _____
6. WHEN STEPS 1-5 ARE COMPLETE INSTRUMENT WILL PRINT TICKET. TICKET PRINTED ONLY IF ALL FIVE STEPS ARE COMPLETED. _____
7. ADVISE THE DEFENDANT TO THEIR RIGHT TO A COMPARISON BLOOD TEST AT THEIR OWN EXPENSE. RESULTS OF BLOOD TEST CAN BE USED TO RESTORE THEIR LICENSE. _____
8. ENTER RESULTS INTO THE BREATH TEST LOG. _____

NOTE: ATTACH TICKET TO SHEET.

REVISED 3/1/94

DEPARTMENT OF STATE POLICE
OFFICE OF ALCOHOL TESTING
DATAMASTER
OPERATIONAL PROCEDURE CHECKLIST

DEFENDANT _____

LIC. NO/DOB _____

ADDRESS _____

BREATH TEST OPERATOR _____

ARRESTING OFFICER _____

TIME FIRST OBSERVED _____

DATE OF ARREST _____

SIMULATOR SERIAL NO. _____

SIMULATOR LOT NO. _____

1. INSERT TICKET. PUSH RUN BUTTON. _____
2. HAVE SUBJECT BLOW INTO MOUTHPIECE FOR SIX TO EIGHT SECONDS. _____
3. SIMULATOR TEST RUN BY INSTRUMENT.
VALID RESULTS: 0.14, 0.15, 0.16. _____
4. HAVE SUBJECT BLOW INTO MOUTHPIECE FOR SIX TO EIGHT SECONDS. _____
5. WHEN PRINTER STOPS REMOVE TICKET. _____
7. ADVISE THE DEFENDANT TO THEIR RIGHT TO A COMPARISON BLOOD TEST AT THEIR OWN EXPENSE. RESULTS OF BLOOD TEST CAN BE USED TO RESTORE THEIR LICENSE. _____
8. ENTER RESULTS INTO THE BREATH TEST LOG. _____

NOTE: ATTACH TICKET TO SHEET.

REVISED 3/1/94

DEPARTMENT OF STATE POLICE
OFFICE OF ALCOHOL TESTING
DATAMASTER WITH KEYBOARD
OPERATIONAL PROCEDURE CHECKLIST

1. INSERT TICKET. PUSH RUN BUTTON. _____
2. ENTER DATA REQUIRED BY KEY BOARD. _____
3. HAVE SUBJECT BLOW INTO MOUTHPIECE FOR
SIX TO EIGHT SECONDS. _____
4. SIMULATOR TEST RUN BY INSTRUMENT.
VALID RESULTS: 0.14, 0.15, 0.16. _____
5. HAVE SUBJECT BLOW INTO MOUTHPIECE FOR
SIX TO EIGHT SECONDS. _____
6. WHEN PRINTER STOPS REMOVE TICKET. _____
7. ADVISE THE DEFENDANT TO THEIR RIGHT TO
A COMPARISON BLOOD TEST AT THEIR OWN
EXPENSE. RESULTS OF BLOOD TEST CAN BE
USED TO RESTORE THEIR LICENSE. _____
8. ENTER RESULTS INTO THE BREATH TEST LOG. _____

NOTE: ATTACH TICKET TO SHEET.

REVISED 3/1/94



The Commonwealth of Massachusetts Department of State Police

WILLIAM F. WELD
GOVERNOR

KATHLEEN M. O'TOOLE
SECRETARY

COLONEL CHARLES F. HENDERSON
SUPERINTENDENT

SIMULATOR SOLUTION

The following is a list of rules in accordance with 501 C.M.R. 2.43 for the STORAGE, HANDLING AND REPLACEMENT of simulator solution.

STORAGE

1. All solution shall be stored in sealed containers and in a cool, dry place away from direct heat.
2. Solution can only be used until its expiration date which is found on the bottle's label.

HANDLING

1. Prior to using any new simulator solution, the simulator container should be rinsed with water and dried thoroughly.
2. A record of the simulator solution lot number shall be kept and made available to all certified operators administering evidentiary tests.
3. All solution is to be heated to 34 C prior to testing.

REPLACEMENT

1. Simulator solution is available at State Police Barracks whenever needed. Solution is shipped to the barracks by OAT. Location of solution pickup has been designated by each department's officer in charge. Any department can pick up solution at any time from any barracks, excluding E-H, even if it is not their designated location.
2. 0.15% simulator solution should be replaced when three consecutive readings of 0.14% are recorded. Failure to change the solution at this time does not invalidate any additional tests with a 0.14 % simulator reading.
3. Simulator solution must be changed when it reaches its expiration date.

Revised 6/02/88

